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ABSTRACT

Minority students aspiring to careers in the health fields are the subject of this study. Data from freshmen who entered college in fall, 1974 are compared with their counterparts in two earlier freshman classes (1966 and 1972) for the purpose of monitoring trends in the characteristics of health career aspirants; in addition, they were compared with all 1974 freshmen for the purpose of defining more precisely the character and quality of potential health practitioners. The data for this study comes from the American Council on Education's Student Informa- tion Form. The report discusses the representation of the different minority groups among health career aspirants relative to their representation in the total freshman class and in the U.S. population; examines trends in the number of minority group members planning on health careers; describes their background characteristics (including economic status); analyzes their college patterns; and looks closely at their personal characteristics, including self-ratings, life goals, and reasons for career choice. The findings are summarized and several recommendations are offered. (JMF)

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WOMEN AND MINORITIES IN HEALTH FIELDS: A TREND ANALYSIS OF COLLEGE FRESHMEN

Volume III

A Comparison of Minority Aspirants To Health Careers

ENGINEEL HOLMSTROM
PAULA R. KNEPPER
LAURA KENT

POLICY ANALYSIS SERVICE
AMERICAN COUNCIL ON EDUCATION
1977

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Engin Inel Holmstrom, Project Director

Paula R. Knepper

Laura Kent

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PREFACE

In 1975, the Bureau of Health Manpower (BHM) contracted with the American Council on Education (ACE) to conduct a study examining recent changes in the pool of students interested in careers in health fields, with special emphasis on women and minority-group members in this pool. Specifically, the study was focused on first-time, full-time freshmen who named one of the health fields as their probable future career. The most recent group of health-career aspirants on whom data were available, those who entered college in fall 1974, were the principal target of investigation. Where appropriate, they were compared with their counterparts in two earlier freshman classes (1966 and 1972) for the purpose of monitoring trends in the characteristics of health-career aspirants; in addition, they were compared with all 1974 freshmen[1/] for the purpose of defining more precisely the character and quality of potential health practitioners.

The data for this study came from the student files of ACE's Cooperative Institutional Research Program and represent weighted responses to the Student Information Form, a survey instrument containing standard demographic and socioeconomic items, as well as questions on college finances, self-ratings, life goals, and similar personal material. For more complete information about the methodology of the study, the reader is referred to the two earlier volumes (Holmstrom, Knepper, and Kent, 1976a, 1976b).

The first volume to come out of the study dealt with those freshmen planning careers in one of the medical professions: medicine, dentistry, pharmacy, optometry, and veterinary medicine. The second volume dealt with freshmen planning careers in nursing or the allied health professions:

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[1] As reported in Astin et al., 1974.

dietetics, health technology, and therapy (physical, occupational, speech); for convenience, this group of health fields is referred to as the NAH professions.

The present volume, the third and last, focuses on the 31,207 minority students among 1974 entering freshmen who named one of the medical professions or one of the NAH professions as their probable future career. The minority groups included are: blacks (i.e., all those who checked the category "Black/Negro/Afro-American" on the 1974 Freshman survey form);[2] American Indians; Asian-Americans (i.e., all those who checked the category "Oriental"); and Hispanic-Americans (i.e., all those who checked either "Mexican-American/Chicano" or "Puerto Rican-American"). The freshman questionnaire also listed a residual category, "Other," but because of its ambiguity--and the probable heterogeneity of the group it represents, which numbered 4,504 students in 1974--this category of students is not discussed in this report.

The unweighted numbers of minority students aspiring to specific careers were in some cases very small. Therefore, only four career groups are covered: (1) those interested in medicine (aspiring physicians), (2) those interested in other medical professions (aspiring dentists, pharmacists, optometrists, and veterinarians), (3) those interested in nursing (aspiring nurses), and (4) those interested in allied health professions (aspiring dietitians, health technicians, and therapists). Further, no data are given by sex categories. Where relevant, minority students are compared with the 233,454 white majority students aspiring to the same health careers.

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[2] Readers are referred to Volumes I and II of this project for more detailed information on black health-career aspirants by sex (Holmstrom, Knepper and Kent, 1976a, 1976b).

The first chapter of this report discusses the representation of the different minority groups among health-career aspirants relative to their representation in the total freshman class and in the U.S. population, examines trends in the number of minority-group members planning on health careers, describes their background characteristics (including socioeconomic status), and analyzes their college patterns. The second chapter looks more closely at their personal characteristics, including self-ratings, life goals, and reasons for career choice. The third and final chapter summarizes and discusses the findings and makes recommendations.

Chapter I

Representation of Minorities Among Health Career Aspirants

According to the 1970 Census figures, over 16 percent of the population of the United States, or about one in six people, belonged to a racial/ethnic minority group. In 1974, 13 percent of the full-time freshmen entering the nation's colleges and universities, and 13.2 percent of those freshmen aspiring to health careers, identified themselves as belonging to a minority group. Table I-1 shows the distribution of minorities in the nation, in the 1974 freshman class, and in the group of health-career aspirants.

Relative to their proportions in the U.S. population, blacks and Hispanic-Americans were underrepresented both among 1974 entering freshmen and among 1974 health-career aspirants, whereas Asian-Americans and American Indians were overrepresented. Relative to their proportions in the 1974 entering freshman class, however, blacks and Asian-Americans were overrepresented among health-career aspirants, Hispanic-Americans underrepresented, and American Indians were about equally represented. (Because the proportions of Asian-Americans and American Indians in all three groups are minute--generally under 1 percent--*overrepresented* and *underrepresented* are, of course, highly relative terms.)

Table I-1

Representation of Minorities in 1970 U.S. Population, in 1974 Entering Freshman Class, and Among 1974 Health-Career Aspirants

	1970 U.S. Population[a]	1974 Freshman Class[b]	1974 Freshman Health-Career Aspirants
Blacks	11.1	7.4	7.7
American Indians	.4	.9	.8
Asian-Americans	.6	.9	1.2
Hispanic-Americans	4.5	2.1	1.8
Other	--	1.7	1.7

[a] *Source*: U.S. Bureau of Census, 1973.

[b] *Source*: Astin et al., 1975.

In 1966, about one in ten health-career aspirant was a member of a minority group; in 1974, the proportion had risen to 13.2 percent.[1/] The increase in the absolute number of minority students planning on health careers was even more impressive: 105.8 percent, compared with only 55.5 percent for whites. The discrepancies between minority and white growth rates differed by career group, however, being much greater for the medical professions (122.5 percent for minorities versus 33 percent for whites) than for the NAH professions (94 percent for minorities versus 83.1 percent for whites). More specifically, the career choices of physician, dentist, and nurse became much more popular with minorities than with whites; the growth in interest in optometry, health technology, and therapy among minorities did not keep pace with the growth among whites. Dietetics as a freshman career choice registered a decrease in the number of minority aspirants (-37.2 percent) but an increase in the number of white aspirants (65.1 percent).

Increases in the absolute number of each minority group naming a health field as their freshman career choice was substantial: the number of American Indians increased by 158.2 percent, the number of blacks by 104.3 percent, and the number of Asian-Americans by 90.2 percent between 1966 and 1974. No information on Hispanic-Americans was obtained in 1966; between 1972 and 1974, however, their number increased by 8.9 percent, compared with a 7 percent in-

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[1] The racial/ethnic item on the 1974 and 1972 freshman questionnaires instructed the respondents to "mark all [categories] that apply." Some students indicated membership in more than one racial/ethnic group and were thus double-counted. Therefore, the totals given in this chapter may be slightly higher than those reported in Volume I and II. In addition, the same item in 1966 asked the student to "mark one"; therefore, increases over the eight-year period may be slightly inflated.

crease for whites (see Table I-2 for absolute numbers).

Table I 2

Number of White and of Minority Health-Career Aspirants in the 1974, 1972, and 1966 Freshman Classes, by Career Group

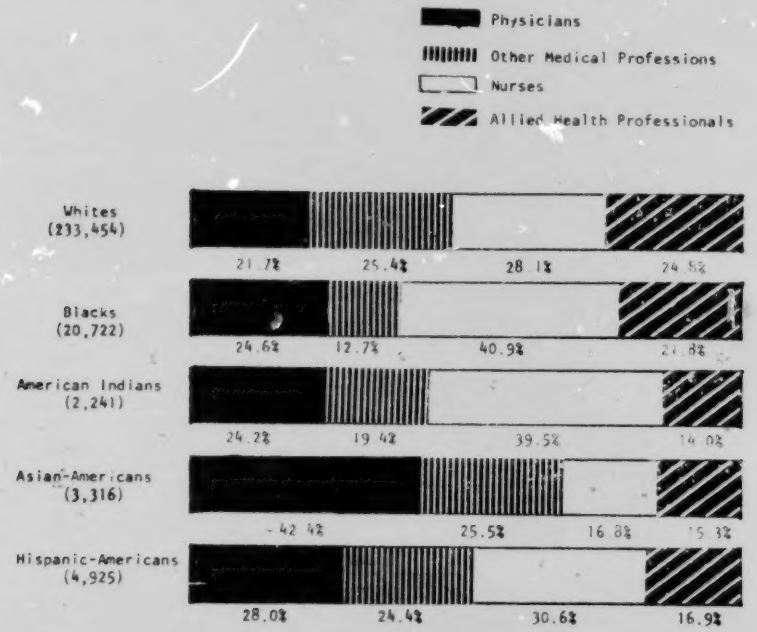
	Total	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Whites					
1974	233,454	50,648	59,417	65,596	57,793
1972	218,224	54,469	51,137	52,800	59,818
1966	150,142	44,367	38,399	31,307	36,069
Blacks					
1974	20,722	5,101	2,633	8,468	4,520
1972	19,518	4,224	2,225	8,453	4,616
1966	10,145	2,521	1,314	2,428	3,882
American Indians					
1974	2,241	542	434	885	380
1972	2,715	969	527	563	656
1966	868	99	182	365	222
Asian-Americans					
1974	3,319	1,409	845	557	507
1972	3,810	1,123	1,014	800*	873
1966	1,745	507	441	212*	585
Hispanic-Americans					
1974	4,925	1,380	1,203	1,508	834
1972	4,524	1,239	962	1,415	908
1966[a/]	--	--	--	--	--
Other					
1974	4,504	1,367	1,123	1,294	720
1972	4,356	1,274	983	1,135	964
1966	4,592	1,019	1,126	1,222	1,225

[a]Racial/ethnic item on the 1966 freshman questionnaire did not include this category.

The white majority in 1974 was fairly evenly distributed among the four career groups, with 21.7 percent naming medicine, 25.4 percent naming other medical professions, 28.1 percent naming nursing, and 24.8 percent naming allied health professions as their probable future career. The total group of minority health-career aspirants was distributed in much the same way (Figure I-1), but different racial/ethnic minorities were attracted to dif-

Figure 1-1

Health Career Choices, by Race/Ethnicity
1974 Freshmen



ferent health careers. Thus, about two in five Asian-Americans planned to become physicians, another one in four aspired to one of the other medical professions, and less than a third were interested in the NAH professions. Hispanic-Americans too preferred the medical to the NAH professions (52.4 percent versus 47.5 percent). But two in five blacks and American Indians named nursing as their career choice, and one in four of these same minority groups named medicine. The allied health professions were more popular among blacks than among other minorities, and the other medical professions less so.

As mentioned in the earlier volumes, medicine and nursing attracted more minority students than did other health fields: About 16 percent of aspiring physicians and nurses were minority students, in contrast to about one in ten of those interested in other medical professions or in allied health

professions. In fact, the allied health professions as a freshman career choice became even "whiter" over the eight-year period studied, the proportion of white aspirants increasing from 86.2 percent of the total in 1966 to 89.2 percent in 1974. Among aspirants to other medical professions the proportion of whites dropped slightly, from 92.6 percent in 1966 to 90.4 percent in 1974.

Background Characteristics

This section describes the background characteristics--including sex, age, marital status, year of high school graduation, and socioeconomic status of minority students aspiring to health careers, comparing them with freshmen-in-general and with the white majority.

Sex

In 1974, 47.8 percent of entering freshmen were women (Table I-3). Women were underrepresented among students interested in medicine (32.8 percent) and other medical professions (39.4 percent) and overrepresented among those interested in nursing (97 percent) and allied health professions (85 percent). Thus, the NAH professions were "feminine" career choices, whereas the medical professions were "masculine." Although the sex distribution patterns of minority health-career aspirants in 1974 were similar to the overall patterns just reported, some differences emerged:

- Among Asian-Americans, as among white students, the medical professions were masculine career choices in that women constituted only 30.4 percent of the Asian-Americans interested in medicine and only 31.6 percent of those interested in other medical professions; the comparable figures for the

Table I-3

Proportion of Women Among 1974, 1972, and 1966 Health-Career Aspirants by Career Group and by Race/Ethnicity

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Whites				
1974	30.3	39.1	97.0	86.0
1972	22.5	26.8	97.0	83.1
1966	16.4	16.7	98.3	83.0
Blacks				
1974	56.0	52.0	98.0	77.3
1972	45.5	34.3	97.1	73.0
1966	33.5	25.3	96.5	73.6
American Indians				
1974	49.6	50.9	93.4	76.3
1972	36.8	39.6	93.8	82.6
1966	19.2	15.9	98.9	84.2
Asian-Americans				
1974	30.4	31.6	100.0	82.2
1972	28.6	25.8	96.4	79.2
1966	17.4	9.3	98.6	79.7
Hispanic-Americans				
1974	35.3	30.4	93.0	58.5
1972	29.8	15.5	91.5	65.4
1966[a]	--	--	--	--

[a]Racial/ethnic item on the 1966 freshman questionnaire did not include this category.

white majority were 30.3 percent and 39.1 percent, respectively. In contrast, 56 percent of the blacks and 49.6 percent of the American Indians interested in medicine were female. Similarly, half of the blacks and American Indians interested in other medical professions were female.

- The differences in the sex distribution of minority and majority students interested in nursing were negligible, since this field is overwhelmingly female-dominated. Thus,

100 percent of the Asian Americans, 98 percent of the blacks, 97 percent of the whites, 93.4 percent of the American Indians, and 93 percent of the Hispanic-Americans interested in nursing were women.

- Among aspirants to allied health professions, 86 percent of the whites and 82.2 percent of the Asian-Americans were female. Interest in the allied health professions was higher among men in the remaining minority groups. Over one-fifth of the blacks and the American Indians and two-fifths of the Hispanic-Americans who named these career choices were male.

Age

The modal age at college entry is 18. For instance, 78.4 percent of the 1974 entering freshmen were 18 or younger. Among health-career aspirants, those interested in the NAH professions tended to be somewhat older than those interested in the medical professions, and this difference held for minority students. In addition, minority students tended to be older than white students. In particular, larger proportions of blacks and of Hispanic-Americans than of other groups were over the modal age of 18 at college entry. Table I-4 shows the the proportion of each group who were 18 or younger.

Table I-4

Proportion of Health-Career Aspirants 18 Years or Younger, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Whites	(86.1)	Whites	(83.1)	Whites	(79.6)	Whites	(84.5)
American Indians	(83.8)	Hispanic-Americans	(81.5)	American Indians	(72.0)	Asian-Americans	(74.8)
Asian-Americans	(80.2)	Asian-Americans	(79.1)	Asian-Americans	(57.7)	Blacks	(64.5)
Blacks	(79.3)	American Indians	(76.4)	Hispanic-Americans	(56.2)	American Indians	(62.8)
Hispanic-Americans	(72.2)	Blacks	(75.9)	Blacks	(55.0)	Hispanic-Americans	(61.3)

Marital Status

Not surprisingly, very few students were married when they entered college. Among freshmen planning on health careers, aspiring nurses (who also tended to be older) were more likely than were students in other career-interest groups to be married. Similarly, larger proportions of minority students interested in NAH professions than of those interested in medical professions were married (Table I-5). For instance, 17.6 percent of the American Indians and about 10 percent of the blacks and Hispanic-Americans interested in nursing were married; one-tenth of the American Indians and about 8 percent of the Asian-Americans and blacks interested in allied health professions were married. In contrast, negligible proportions (under 3 percent) of any racial/ethnic group aspiring to the medical professions were married.

Table I-5

Proportion of Married 1974 Health-Career Aspirants, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Hispanic Americans, American Indians	(2.7)	Blacks	(1.4)	American Indians	(17.6)	American Indians	(10.2)
		Whites	(1.1)	Blacks	(10.5)	Blacks	(8.1)
Blacks	(1.5)	Hispanic-Americans	(1.0)	Hispanic-Americans	(10.4)	Asian-Americans	(7.8)
Whites	(.4)	Asian-Americans	(.9)	Whites	(5.4)	Hispanic-Americans	(3.6)
Asian-Americans	(.0)	American Indians	(.0)	Asian-Americans	(4.3)	Whites	(1.1)

Year of High School Graduation

Consistent with age differences among 1974 health-career aspirants, whites were more likely than were minority students, and aspiring physicians were more likely than were other career groups, to have graduated from high school in 1974 (Table I-6). Blacks were somewhat more likely than were others to delay college entry, with three in ten of those aspiring to nursing having grad-

uated prior to 1974. In addition, one-tenth of the Hispanic-Americans aspiring to medical professions, about 15 percent of those aspiring to nursing, and one-fifth of those aspiring allied health professions had graduated in 1973 or earlier. American Indians planning to go into NAH professions or other medical professions were somewhat more likely to delay college entry, but 100 percent of those aspiring to medicine had graduated in 1974.

Table I-6

Proportion of 1974 High School Graduates Among 1974 Health-Career Aspirants, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
American Indians	(100.0)	Asian-Americans	(96.3)	Asian-Americans	(91.1)	Whites	(95.1)
Asian-Americans	(97.6)	Whites	(95.3)	Whites	(89.7)	American Indians	(86.9)
Whites	(97.2)	American Indians	(91.3)	Hispanic-Americans	(86.2)	Asian-Americans	(85.8)
Blacks	(92.8)	Hispanic-Americans		American Indians	(79.4)	Hispanic-Americans	(80.7)
Hispanic-Americans	(89.4)	Blacks	(90.2)	Blacks	(70.3)	Blacks	(80.1)

Socioeconomic Status

As mentioned in the two earlier volumes, students interested in medicine came from more affluent backgrounds than did other health-career aspirants or freshmen-in-general, and nurses were the least affluent group, with a median parental income below the level for all freshmen. Among minorities planning on health careers, the most affluent were Asian-Americans,[2/] followed

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[2]This finding is consistent with income figures for the general population. The average family income of Asian-Americans is generally above the national average. According to Census figures, in 1969, the average national family income was $9,433, as compared with $12,515 for Japanese-Americans, $10,610 for Chinese-Americans, and $9,318 for Filipinos. The least affluent of all Asian-Americans (that is, Filipinos) still earned $3,127 more, on the average, than did blacks and other racial/ethnic groups (U.S. Bureau of Census, 1973, 1976).

by American Indians and Hispanic-Americans (Table I-7). Blacks came from the lowest income backgrounds, reporting parental incomes that were only half those reported by the white majority; those aspiring to other medical professions were an exception, reporting a median parental income that was 70.7 percent of that reported by whites. All minority groups, however, reported lower median parental incomes than were reported by the white majority in each of the four career groups.

Table I-7

Median Parental Income (1973) of 1974 Health-Career Aspirants, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Whites	($18,076)	Whites	($16,230)	Whites	($13,578)	Whites	($14,599)
Asian-Americans	($15,521)	American Indians	($14,923)	American Indians	($11,152)	Asian-Americans	($13,409)
American Indians	($13,311)	Asian-Americans	($13,310)	Asian-Americans	($10,261)	American Indians	($11,999)
Hispanic-Americans	($10,083)	Hispanic-Americans	($13,011)	Hispanic-Americans	($ 7,880)	Hispanic-Americans	($ 8,099)
Blacks	($ 9,565)	Blacks	($11,471)	Blacks	($ 5,660)	Blacks	($ 7,261)

Among health-career aspirants, those planning to become physicians were most likely to have college-educated parents, followed by those interested in other medical professions. Table I-8 and I-9 show that, of the racial/ethnic groups, Asian-Americans came from the best-educated families, especially with respect to mother's education. Whites were next, then American Indians. Blacks and Hispanic-Americans were generally the least likely to report that their parents were college graduates; among blacks, mothers more frequently had a college education than fathers.

Asian-Americans and American Indians resembled the white majority in the proportions reporting that their fathers worked in a health field; relatively few blacks and Hispanic-Americans said their fathers worked in these fields (Table I-10).

Table I-8

Proportion of 1974 Health-Career Aspirants Whose Fathers Had at Least a College Education, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Asian-Americans	(58.1)	Whites	(36.1)	Asian-Americans	(26.7)	Whites	(31.3)
Whites	(50.3)	Asian-Americans	(35.5)	Whites	(25.2)	Asian-Americans	(28.5)
American Indians	(37.8)	American Indians	(34.8)	American Indians	(11.5)	American Indians	(16.5)
Blacks	(28.2)	Blacks	(19.6)	Blacks	(6.1)	Blacks	(9.0)
Hispanic-Americans	(16.8)	Hispanic-Americans	(15.7)	Hispanic-Americans	(.3)	Hispanic-Americans	(7.6)

Table I-9

Proportion of 1974 Health-Career Aspirants Whose Mothers Had at Least a College Education, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Asian-Americans	(38.0)	Asian-Americans	(27.8)	Asian-Americans	(25.5)	Whites	(20.6)
Whites	(30.8)	Blacks	(22.8)	Whites	(16.3)	Asian-Americans	(16.9)
Blacks	(26.1)	Whites	(21.2)	American Indians, Blacks	(5.2)	American Indians	(12.4)
American Indians	(22.5)	American Indians	(16.7)			Blacks	(10.9)
Hispanic-Americans	(12.6)	Hispanic-Americans	(7.1)	Hispanic-Americans	(1.1)	Hispanic-Americans	(4.5)

Table I-10

Proportion of 1974 Health-Career Aspirants Whose Fathers Were Employed in Health Fields, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Asian-Americans	(14.2)	American Indians	(14.1)	American Indians	(3.7)	American Indians	(6.0)
Whites	(11.8)	Asian-Americans	(7.3)	Asian-Americans	(3.4)	Whites	(2.9)
Blacks	(7.2)	Whites	(6.4)	Whites	(3.1)	Blacks, Hispanic-Americans	(2.8)
Hispanic-Americans	(5.3)	Hispanic-Americans	(6.0)	Blacks	(1.7)		
American Indians	(3.4)	Blacks	(4.8)	Hispanic-Americans	(1.3)	Asian-Americans	(2.5)

About one in five health-career aspirants reported that their fathers worked in other (nonhealth) professions, including education. Those aspiring to the medical professions were more likely to have fathers in professional fields than were those aspiring to NAH professions, except that two in five Asian-Americans planning to become nurses said their fathers were professionals (Table I-11). Overall, Asian-Americans, whites, and American Indians were more likely to report that their fathers were professionals than were blacks and Hispanic-Americans. About 4 percent of the 1974 health-career aspirants said their fathers were in education (teaching, administration); the proportions ranged from 10.8 percent of American Indians planning to become physicians to none of the Asian-Americans and Hispanic-Americans interested in nursing. Most of the other fathers in the professions were engineers.

Table I-11

Proportion of 1974 Health-Career Aspirants Whose Fathers Were Employed in Other Professional Fields, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Asian-Americans	(29.7)	American Indians	(31.4)	Asian-Americans	(39.2)	Asian-Americans	(27.1)
American Indians	(27.7)	Hispanic-Americans	(25.3)	Whites	(21.3)	Whites	(23.5)
Whites	(25.2)	Whites	(24.0)	American Indians	(16.3)	Blacks	(10.9)
Blacks	(20.0)	Asian-Americans	(21.8)	Blacks	(14.2)	Hispanic-Americans	(8.3)
Hispanic-Americans	(19.1)	Blacks	(14.3)	Hispanic-Americans	(8.3)	American Indians	(7.7)

Close to three in ten health-career aspirants had fathers in business, the range being from 36 percent of the Asian-Americans aspiring to other medical professions to only 2.6 percent of Hispanic-Americans in allied health careers who reported that their fathers were businessmen (Table I-12)

Overall, about one in three health-career aspirants said their fathers

Table I-12

Proportion of Health-Career Aspirants Whose Fathers Were Businessmen, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Whites	(30.8)	Asian-Americans	(36.0)	Whites	(24.1)	Whites	(27.8)
Asian-Americans	(23.8)	Whites	(28.3)	Hispanic-Americans	(14.5)	Asian-Americans	(16.8)
American Indians	(16.2)	Blacks	(15.9)	American Indians	(13.3)	American Indians	(9.0)
Blacks	(11.7)	American Indians	(14.4)	Asian-Americans	(7.5)	Blacks	(6.1)
Hispanic-Americans	(11.5)	Hispanic-Americans	(12.7)	Blacks	(8.4)	Hispanic-Americans	(2.6)

were employed in relatively low-level occupations (skilled, semiskilled, unskilled jobs; "other nonprofessional" jobs), the proportion being highest among aspiring nurses and lowest among aspiring physicians. Of the racial/ethnic groups, Asian-Americans were least likely to have fathers who worked in such occupations, followed by whites and American Indians (Table I-13). Blacks and Hispanic-Americans were most likely to report that their fathers were employed in low-level occupations; for instance, four in five of the Hispanic-Americans interested in allied health professions said their fathers worked in such jobs.

Table I-13

Proportion of 1974 Health-Career Aspirants Whose Fathers Worked in Blue-Collar or "Other Nonprofessional" Occupations, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Hispanic-Americans	(60.5)	Blacks	(59.2)	Blacks	(71.4)	Hispanic-Americans	(80.3)
Blacks	(56.3)	Hispanic-Americans	(54.2)	American Indians	(66.7)	Blacks	(74.4)
American Indians	(50.0)	American Indians	(40.1)	Hispanic-Americans	(64.0)	American Indians	(71.0)
Whites	(31.0)	Whites	(39.9)	Whites	(49.5)	Asian-Americans	(50.9)
Asian-Americans	(29.2)	Asian-Americans	(26.1)	Asian-Americans	(42.3)	Whites	(44.3)

Overall, about 2 percent of health-career aspirants reported that their fathers were unemployed. Unemployment rates were highest among the fathers of blacks and Hispanic-Americans and lowest among the fathers of whites and American Indians, but there was considerable variation among the racial/ethnic groups by career choice (Table I-14), ranging from a high of 12.1 percent of Hispanic-Americans aspiring to nursing to none of the American Indians aspiring to other medical professions. Asian-Americans came out less well on this economic characteristic than on others, in that 8.8 percent of those aspiring to other medical professions and 7.6 percent of those aspiring to nursing said their fathers were unemployed.

Table I-14

Proportion of 1974 Health Career Aspirants Whose Fathers Were Unemployed, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Blacks	(4.8)	Asian-Americans	(8.8)	Hispanic-Americans	(12.1)	American Indians	(6.3)
Hispanic-Americans	(3.6)	Blacks	(5.8)	Blacks	(8.3)	Hispanic-Americans	(6.0)
Asian-Americans	(3.0)	Hispanic-Americans	(1.8)	Asian-Americans	(7.6)	Blacks	(5.8)
American Indians	(2.7)	Whites	(1.5)	Whites	(2.0)	Whites	(1.5)
Whites	(1.2)	American Indians	(.0)	American Indians	(.0)	Asian-Americans	(.7)

Only on this last characteristic (i.e., having unemployed fathers), however, did Asian Americans among health-career aspirants more closely resemble blacks and Hispanic-Americans than whites. On other demographic and socioeconomic characteristics, they were highly similar to the white majority. In fact, their parents tended to be better educated than those of white health-career aspirants: Their fathers were equally or more likely to have the baccalaureate degree or better, and their mothers were substantially more likely to be college graduates (except among aspiring nurses). They

were less affluent than whites, however, with median parental incomes about $3,000 less than were reported by whites. Further, Asian-Americans were highly traditional in their career choices in that fewer Asian-American women than women from other racial/ethnic minorities aspired to the male-typed medical professions.

Somewhat surprisingly, in view of their "disadvantaged" image, American Indians among health-career aspirants next most closely resembled the white majority in their demographic characteristics and socioeconomic status. Except among aspiring physicians, where the income differential was over $5,000, median parental incomes of American Indians were only about $2,000 less than those reported by whites in other career-interest groups. Their parents were much less likely to be college educated, however: For instance, only 5.2 percent of the American Indians interested in nursing said their mothers had a baccalaureate.

Blacks and Hispanic-Americans tended to be slightly older than others and came from more disadvantaged backgrounds. Blacks reported the lowest median parental income, though their parents--especially their mothers--tended to be somewhat better educated than did the parents of Hispanic-Americans. Slightly larger proportions of blacks than of Hispanic-Americans reported that their fathers were unemployed; about equal proportions of both groups said their fathers worked in low-level occupations. Very few of either group said their fathers were employed in health fields; however, blacks had a slight edge here. Slightly more Hispanic-Americans than blacks said their fathers were (nonhealth) professionals. These small differences between the two minority groups can hardly account for the income difference, which ranged from $2,220 among aspiring nurses to $518 among aspiring physicians and which

in each case favored Hispanic-Americans.

Institutional Distribution

The institutional distribution of minority students differed partly because of socioeconomic differences and partly because the different minority groups are concentrated in different parts of the country.

Blacks were most likely to attend colleges and universities in the South, followed by those in the East. They were more likely than others to attend private four-year colleges--an institutional category that includes many predominantly black institutions--and were least likely to attend public universities. They also tended to be concentrated in low-selectivity institutions.[3]

American Indians were overrepresented in institutions in the West. They were most likely to attend public two-year colleges, although some enrolled in private black colleges. They were least often found in private universities and Catholic four-year colleges.

Asian-Americans were, not surprisingly, overrepresented in institutions in the West and East. They were most likely to attend highly selective private universities and medium or very highly selective private-nonsectarian four-year colleges. They were least often found in Catholic or Protestant four-year colleges.

Hispanic-Americans were overrepresented in the West and East. They were most likely to attend public-two-year colleges and Catholic four-year colleges of low selectivity and least likely to attend Protestant four-year colleges and public universities.

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[3]Selectivity is an estimate of the average academic ability of the entering freshman class based on the median NMSQT score. For further details see Astin et al., 1974.

Minorities interested in health careers showed similar attendance patterns:

- Blacks were more likely than others to attend four-year colleges and private institutions.
- Asian-Americans were more likely than others to attend universities.
- Hispanic-Americans were more likely than others to enroll in two-year colleges and in public institutions.
- American Indians were similar to all freshmen in their enrollment patterns: Nearly two-fifths entered two-year colleges, over one-third entered four-year colleges, one-fourth entered universities.
- Overall, aspirants to medical professions were more likely to enroll in universities than were aspirants to NAH professions.

Factors Influencing College Choice

Students were asked to indicate how important each of several factors was to them in their choice of a particular institution. Table I-15 shows the proportion of each racial/ethnic category, by career group, who said that a given factor was very important to them. The institution's having a very good academic reputation was regarded as very important by 50.4 percent of the 1974 entering freshmen. Of those interested in health careers, seven in ten aspiring physicians, three in five aspiring nurses, but somewhat smaller proportions of those aspiring to the medical professions and to allied health professions indicated that this reason was very important. Of the racial/ethnic groups, blacks and American Indians were most concerned with this

factor, although over half of almost all the subgroups regarded it as very important.

The next most influential factor among freshmen-in-general was the institution's offer of special programs, mentioned by 30.4 percent. Students interested in nursing and allied health professions gave greater weight to this factor than did those aspiring to medical professions, an understandable difference in view of the differing educational requirements of these career

Table I-15

Factors Influencing College Choice[a] of 1974 Health Career Aspirants, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
			Academic Reputation				
American Indians	(74.9)	Blacks	(67.0)	Blacks	(65.5)	Hispanic-Americans	(64.3)
Blacks	(70.9)	American Indians	(61.1)	Asian-Americans	(64.4)	American Indians	(57.7)
Whites	(70.2)	Asian-Americans	(59.3)	Whites	(60.2)	Blacks	(57.2)
Asian-Americans	(61.9)	Whites	(55.7)	Hispanic-Americans	(59.2)	Whites	(54.9)
Hispanic-Americans	(55.8)	Hispanic-Americans	(47.6)	American Indians	(53.4)	Asian-Americans	(49.7)
			Special Programs				
American Indians	(44.6)	Blacks	(40.2)	Hispanic-Americans	(61.6)	Hispanic-Americans	(53.3)
Blacks	(41.8)	Whites	(37.1)	Blacks	(53.3)	Blacks	(49.0)
Hispanic-Americans	(41.6)	Asian-Americans	(36.8)	Asian-Americans	(52.5)	American Indians	(45.4)
Asian-Americans	(31.3)	Hispanic-Americans	(32.2)	American Indians	(51.7)	Whites	(42.1)
Whites	(29.0)	American Indians	(22.5)	White	(45.6)	Asian Americans	(29.6)
			Offer of Financial Assistance				
Blacks	(41.5)	American Indians	(48.4)	Blacks	(41.5)	Hispanic-Americans	(44.4)
Hispanic-Americans	(40.7)	Blacks	(39.2)	American Indians	(34.1)	Blacks	(42.7)
American Indians	(35.9)	Hispanic-Americans	(29.5)	Hispanic-Americans	(33.3)	American Indians	(28.9)
Asian-Americans	(24.7)	Asian-Americans	(14.3)	Asian-Americans	(27.3)	Asian-Americans	(22.7)
Whites	(18.4)	Whites	(13.1)	Whites	(15.1)	Whites	(15.1)
			Low Tuition				
Asian-Americans	(26.5)	Hispanic-Americans	(42.0)	Hispanic-Americans	(43.1)	American Indians	(33.5)
Hispanic-Americans	(25.1)	American Indians	(31.6)	American Indians	(41.5)	Hispanic-Americans	(31.8)
Blacks	(25.1)	Blacks	(29.3)	Blacks	(30.7)	Blacks	(30.4)
Whites	(19.3)	Whites	(24.6)	Whites	(28.6)	Whites	(27.9)
American Indians	(14.8)	Asian-Americans	(21.6)	Asian-Americans	(17.8)	Asian-Americans	(12.1)

[a]Proportion indicating that factor was "very important" in their choice of a particular institution.

groups. Of the racial/ethnic categories, Hispanic-Americans and blacks were most concerned with the special programs offered by the institution. For instance, three in five of the Hispanic-Americans interested in nursing said that this factor was very important to them.

The institution's offer of financial assistance was cited as very important by 18.6 percent of the 1974 entering freshmen. Among health-career aspirants, it was most likely to be an influential factor to aspiring physicians and least likely to make a difference to those interested in other medical professions. Racial/ethnic differences were marked, with about two in five blacks in each of the four career-interest groups, and slightly smaller overall proportions of Hispanic-Americans and American Indians, saying that the offer of financial assistance was very important to them, in contrast to only about one in five Asian-Americans and about 15 percent of whites.

Just over one in four entering freshmen cited low tuition as a factor strongly affecting their choice of an institution. The proportions were about the same among students interested in other medical professions and in allied health professions. But three in ten aspiring nurses, in contrast to only one in five aspiring physicians, cited this as a very important factor--again, an understandable difference in view of the income differential between these two career-interest groups. Among the racial/ethnic groups, Hispanic-Americans were most likely to cite this factor, followed by American Indians and blacks. Asian-Americans showed relatively little concern over low tuition.

College Finances

Approximately 17 percent of aspiring physicians and nurses expressed major concern over their ability to pay for college, compared with about 15

percent of those interested in other medical professions and in allied health professions and of freshmen-in-general. Though the differences among career groups were very small, the racial/ethnic differences in expressed anxiety over college finances were considerable and were closely related to median parental income (Table I-16). Thus, no more than 14 percent of the whites (the most affluent group) in any career category said they felt major concern; Asian-Americans were next most likely to be relatively free of worry about paying for college, although one in five of those aspiring to other medical professions felt major concern. But, overall, about one in three blacks and Hispanic-Americans (the least advantaged groups, socioeconomically) said that they felt major concern about being able to pay for college. Since Hispanic-Americans reported median parental incomes that averaged about $1,200 more than those reported by blacks, it is not immediately clear why they were just as likely as blacks to express anxiety over finances; one possible explanation is that they were more apt to aspire to the medical professions than to the NAH professions (some of which required no more than an associate degree) and thus anticipated a higher-cost college education than did blacks.

Whites, Asian-Americans, and American Indians were more likely than were

Table I-16

Proportion of 1974 Health-Career Aspirants Expressing Major Concern Over College Finances, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Hispanic-Americans	(41.9)	Blacks	(30.3)	Hispanic-Americans	(45.9)	American Indians	(33.0)
Blacks	(32.6)	Hispanic-Americans	(24.8)	Blacks	(38.9)	Blacks	(30.4)
American Indians	(31.9)	Asian-Americans	(21.2)	American Indians	(28.1)	Hispanic-Americans	(26.4)
Asian-Americans	(16.9)	American Indians	(14.9)	Asian-Americans	(14.0)	Whites	(13.8)
Whites	(14.3)	Whites	(13.8)	Whites	(13.1)	Asian-Americans	(12.2)

Hispanic-Americans and blacks (the less affluent minorities) to be self-supporting: that is, to finance their college education through parental aid, earnings from part-time or summer employment, and their own savings (Table I-17).

Blacks and Hispanic-Americans, on the other hand, relied more heavily than did the other racial/ethnic groups on federal student aid programs (Basic Educational Opportunity Grants, Supplemental Educational Opportunity

Table I-17

Proportion of 1974 Health-Career Aspirants Reporting "Self-Supporting" Sources of College Finance, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
			Parents				
Whites	(82.9)	Asian-Americans	(80.1)	Whites	(73.6)	Whites	(80.8)
American Indians	(79.0)	Whites	(78.8)	Asian-Americans	(60.3)	Asian-Americans	(63.7)
Asian-Americans	(76.1)	Hispanic-Americans	(69.2)	Hispanic-Americans	(54.6)	Hispanic-Americans	(63.5)
Blacks	(66.8)	American Indians	(67.1)	American Indians	(51.3)	American Indians	(62.7)
Hispanic-Americans	(60.2)	Blacks	(63.7)	Blacks	(42.5)	Blacks	(52.7)
			Part-Time or Summer Employment				
Whites	(59.6)	American Indians	(69.1)	Whites	(55.5)	Asian-Americans	(61.7)
American Indians	(56.5)	Whites	(59.5)	American Indians	(39.3)	Whites	(59.8)
Asian-Americans	(54.2)	Asian-Americans	(58.5)	Asian-Americans	(37.5)	Hispanic-Americans	(56.1)
Hispanic-Americans	(48.6)	Hispanic-Americans	(52.5)	Hispanic-Americans	(27.0)	American Indians	(34.4)
Blacks	(40.4)	Blacks	(37.3)	Blacks	(26.0)	Blacks	(30.6)
			Savings				
Whites	(46.5)	Whites	(48.6)	Whites	(44.9)	Whites	(49.7)
Asian-Americans	(40.2)	Asian-Americans	(45.1)	Asian-Americans	(33.0)	Asian-Americans	(47.6)
American Indians	(35.2)	American Indians	(39.9)	American Indians	(22.1)	American Indians	(36.0)
Blacks	(22.1)	Hispanic-Americans	(35.5)	Hispanic-Americans	(17.8)	Hispanic-Americans	(32.5)
Hispanic-Americans	(19.3)	Blacks	(23.7)	Blacks	(16.1)	Blacks	(18.1)

Grants, and College Work-Study) to help finance their college education (Table I-18). Hispanic-Americans were slightly more likely than others to receive state scholarships or grants, but the differences among the racial/ethnic groups with respect to state aid were very slight.

Table I-18

Proportion of 1974 Health-Career Aspirants Reporting Federal/State Sources of College Finance, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Basic Educational Opportunity Grants (BEOG)							
Blacks	(44.0)	Hispanic-Americans	(54.8)	Blacks	(43.1)	Blacks	(49.8)
Hispanic-Americans	(42.1)	Blacks	(48.6)	Hispanic-Americans	(36.0)	Hispanic-Americans	(48.7)
American Indians	(24.7)	Asian-Americans	(24.8)	American Indians	(22.5)	American Indians	(27.9)
Asian-Americans	(18.7)	American Indians	(19.6)	Asian-Americans	(18.7)	Asian-Americans	(21.1)
Whites	(13.6)	Whites	(14.3)	Whites	(16.5)	Whites	(16.2)
Supplemental Educational Opportunity Grants (SEOG)							
Hispanic-Americans	(16.1)	Blacks	(19.3)	American Indians	(16.6)	Blacks	(13.6)
Blacks	(13.1)	Hispanic-Americans	(10.4)	Asian-Americans	(12.0)	American Indians	(10.8)
Asian-Americans	(6.1)	Whites	(3.4)	Blacks	(8.9)	Hispanic-Americans	(8.9)
American Indians	(4.2)	American Indians	(2.3)	Hispanic-Americans	(6.8)	Whites	(3.9)
Whites	(3.5)	Asian-Americans	(2.1)	Whites	(3.7)	Asian-Americans	(1.6)
College Work-Study (CWS)							
Blacks	(21.0)	Blacks	(25.7)	Blacks	(17.5)	Blacks	(25.0)
Asian-Americans	(11.4)	Hispanic-Americans	(9.0)	American Indians	(12.1)	Hispanic-Americans	(20.5)
American Indians	(11.2)	American Indians	(8.5)	Hispanic-Americans	(11.5)	American Indians	(16.8)
Hispanic-Americans	(11.2)	Whites	(7.3)	Asian-Americans	(6.8)	Asian-Americans	(16.0)
Whites	(8.3)	Asian-Americans	(2.0)	Whites	(6.8)	Whites	(8.1)
State Scholarship or Grant							
Asian-Americans	(23.8)	American Indians	(23.3)	American Indians	(16.7)	Hispanic-Americans	(18.1)
Hispanic-Americans	(23.1)	Hispanic-Americans	(18.3)	Asian-Americans	(16.5)	Whites	(15.9)
Blacks	(18.3)	Blacks	(18.2)	Whites	(16.3)	Blacks	(13.2)
Whites	(16.5)	Asian-Americans	(16.4)	Hispanic-Americans	(11.1)	American Indians	(12.9)
American Indians	(14.4)	Whites	(15.4)	Blacks	(9.7)	Asian-Americans	(5.7)

Overall, relatively small proportions of health-career aspirants borrowed from any source to finance their college education; those interested in careers in the medical professions were somewhat more likely to take loans than were those interested in the NAH professions (Table I-19). Of the racial/ethnic groups, blacks were most likely to go into debt to pay for college: For instance, 18.6 percent of the black aspiring physicians borrowed from the National Direct Student Loan program. Next most likely to borrow were American

Indians, followed by whites and Hispanic-Americans. Asian-Americans were least likely to take loans.

In general, attendance patterns, reasons for college choice, and sources of college finances seemed to follow the patterns of socioeconomic differences found among minorities interested in health careers.

Table I-19

Proportion of 1974 Health-Career Aspirants Reporting Loans as a Source of College Finance, by Career Group and by Race/Ethnicity

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
			Federal Guaranteed Student Loan (FGSL)				
American Indians	(13.4)	Blacks	(11.6)	Whites	(7.2)	Blacks	(9.2)
Hispanic-Americans	(11.2)	Whites	(7.5)	Blacks	(7.0)	Whites	(7.4)
Blacks	(9.8)	Hispanic-Americans	(6.8)	Hispanic-Americans	(5.9)	American Indians	(6.6)
Asian-Americans	(9.2)	American Indians	(5.1)	American Indians	(5.0)	Asian-Americans	(5.3)
White	(8.2)	Asian-Americans	(3.2)	Asian-Americans	(4.7)	Hispanic-Americans	(.7)
			National Direct Student Loan (NDSL)				
Blacks	(18.6)	Blacks	(15.2)	Blacks	(9.2)	Blacks	(15.4)
Hispanic-Americans	(13.9)	American Indians	(14.7)	Whites	(4.8)	Hispanic-Americans	(11.3)
American Indians	(11.4)	Hispanic-Americans	(6.7)	American Indians	(4.7)	Asian-Americans	(9.7)
Asian-Americans	(10.4)	Whites	(5.5)	Asian-Americans	(2.9)	Whites	(7.0)
Whites	(8.6)	Asian-Americans	(4.9)	Hispanic-Americans	(2.0)	American Indians	(3.1)
			Other Loans				
Blacks	(5.8)	Blacks	(6.4)	Hispanic-Americans	(9.5)	American Indians	(10.5)
American Indians	(5.7)	Whites	(4.8)	Whites	(6.6)	Blacks	(4.5)
Asian-Americans	(4.9)	Asian-Americans	(3.9)	American Indians	(6.4)	Whites	(4.4)
Whites	(4.2)	Hispanic-Americans	(2.5)	Asian-Americans	(5.4)	Hispanic-Americans	(3.8)
Hispanic-Americans	(3.3)	American Indians	(.9)	Blacks	(4.9)	Asian Americans	(2.0)

Chapter II

Personality Characteristics

This chapter deals with the personality characteristics of minority students aspiring to health careers, comparing them with those of the white majority. Specifically, self-ratings, life goals, and reasons for career choice are discussed; responses to these items provide insight into personality differences--including differences in interests, attitudes, and values--among different groups of students. These differences seem to parallel the differences in socioeconomic background; however, they also seem to differentiate between the sexes, among racial/ethnic categories, and among aspirants to different types of careers.

Research evidence indicates that students who are, or who perceive themselves to be, "atypical" in a field--that is, different in significant ways from the majority of students in the field--are more likely than are "typical" students to defect from that field. To take an obvious example, women who initially major in male-dominated fields such as engineering are more likely than are men to switch their majors to more "feminine" choices during the undergraduate years. Overt or subtle pressures--from parents, faculty and peers--are often the cause of such defections. Not only such obvious characteristics as a student's sex and racial/ethnic background, however, but also abilities, values, interests, and so forth may be significant determinants of whether that student remains faithful to freshman plans (including career choice, degree aspirations, and probable major). For instance, a very altruistic but self-effacing person in a field where the majority of students are ambitious, materialistic, and aggressive may simply not be able to make good grades in the field and may, in addition, feel so uncomfortable and out-of-step as to make persistence in the field impossible. Thus, the

personal material covered in this chapter may furnish clues as to which minority groups are most likely to succeed in a given health career on the basis of the "fit" between the characteristics of that group and the characteristics of the majority in the field--which, racially, means the white majority.

Self-Ratings

Students were asked to rate themselves on each of 22 personal traits as "compared with the average student of your own age." The questionnaire item taps a variety of self-perceived strengths (or shortcomings), ranging from qualities associated with academic achievement (e.g., academic ability, mathematical ability, drive to achieve) to qualities associated with social success (e.g., understanding of others, popularity, leadership ability). Some of the traits listed represent nonintellective skills (e.g., artistic ability, athletic ability), some are aspects of temperament (e.g., cheerfulness, stubbornness), some reflect political attitudes (e.g., liberalism, conservatism). Though most may be considered positive attributes, some have unfavorable connotations (e.g., defensiveness, sensitivity to criticism).

The traits that students most commonly ascribe to themselves are understanding of others, drive to achieve, cheerfulness, and academic ability; at least half the entering freshmen in 1966, 1972, and 1974 saw themselves as "above average" or in "the highest 10 percent" on these four traits. Generally, freshmen aspiring to health careers were even more likely than were all freshmen to rate themselves high on the first three of these traits, but self-perceptions of superior academic ability were more characteristic of students interested in the medical professions than of those interested in the NAH

professions. Overall, larger proportions of students planning on careers in the medical professions than of those planning on careers in the NAH professions saw themselves as outstanding on various traits related to academic performance. Aspiring physicians seemed to be the most self-confident of all health-career aspirants, being more inclined than the average freshman to rate themselves above average on all 22 listed traits (though they were very close to the national norms on defensiveness and sensitivity to criticism--two traits that may be regarded as undesirable--and on artistic ability). In contrast, aspiring nurses seemed unsure of themselves, being markedly less inclined than average to rate themselves high on academically oriented traits.[1/] On only three traits--understanding, cheerfulness, and drive to achieve--did larger proportions of aspiring nurses than of freshmen-in-general rate themselves above average, and those three traits strongly characterized all aspirants to health careers

The findings for minority students were similar: That is, minority students interested in health careers were more likely than was the average freshman to see themselves as understanding, cheerful, and motivated to achieve. Those planning to become physicians were the most assured, while those planning to become nurses were the most modest.

Table II-1 shows the five traits that were top-ranked by each of the

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[1]The differences in the self-ratings of aspiring physicians and of aspiring nurses are probably more attributable to socioeconomic factors than to sex. Women aspiring to become physicians were just as confident of their academic capabilities as their male counterparts (Holmstrom, Knepper, and Kent, 1976a). Further, women in allied health fields, who generally came from higher socioeconomic backgrounds than nurses, were more confident in their self-descriptions (Holmstrom, Knepper, and Kent, 1976b).

minority groups and by the white majority among health-career aspirants, as well as by all freshmen. Thus, understanding and drive to achieve were the "top two" traits for all students interested in health careers (except Asian-Americans) and for freshmen-in-general. Whites, American Indians, and Asian-Americans were more apt than others to rate themselves high on academic ability, whereas blacks and Hispanic-Americans were more apt to rate themselves high on cheerfulness. Intellectual self-confidence was among the top five traits for whites, blacks and Hispanic-Americans but not for American Indians, Asian-Americans, or all freshmen.

In addition, several of the groups had a unique trait among their top five: For blacks, it was social self-confidence; for American Indians, stubbornness; and for Asian-Americans, mathematical ability. On the other hand, freshmen-in-general, but no group of health-career aspirants, ranked leadership ability among their top five qualities.

Overall, in their self-ratings, minority students aspiring to health careers more closely resembled their white counterparts than they did all

Table II-1

The Five Top-Ranked Traits[a] of Each Racial/Ethnic Group of 1974 Health Career Aspirants and of All 1974 Freshmen

Whites	Blacks	American Indians	Asian-Americans	Hispanic-Americans	All Freshmen
Understanding	Drive to achieve	Understanding	Understanding	Understanding	Understanding
Drive to achieve	Understanding	Drive to achieve	Academic ability	Drive to achieve	Drive to achieve
Academic ability	Cheerfulness	Academic ability	Drive to achieve	Cheerfulness	Academic ability
Cheerfulness	Intellectual self-confidence	Stubbornness[b]	Cheerfulness	Intellectual self-confidence	Cheerfulness
Intellectual self-confidence	Social self-confidence	Cheerfulness[b]	Mathematical ability	Academic ability	Leadership ability

[a]Rank-ordered by proportions rating themselves as above average or in the top 10 percent on the trait.

[b]A tie.

freshmen, suggesting that a given career or related group of careers attracts similar personality types, whatever their racial/ethnic background. Some interesting differences among the minority groups emerged, however, as is indicated in the following "self-image profiles. (For the self-ratings of the white majority and more detailed tables for each of the minority groups see Summary Tables II-A through II-E at the end of the chapter.)

Blacks

Blacks planning on health careers tended to portray themselves as understanding, cheerful, motivated to achieve, and intellectually and socially self-confident. Their considerable social self-confidence was consistent with their high self-ratings on popularity, popularity with the opposite sex, and physical attractiveness (though blacks planning to become nurses were less likely than were blacks aspiring to other health careers to manifest such assurance in their social skills). On the other hand, their intellectual self-confidence may be unwarranted in view of the relatively low ratings they gave themselves on academic ability, mathematical ability, and writing ability--three traits that would seem to be closely related to successful performance in college. Blacks planning to become physicians were an exception; they were more likely than were other black health-career aspirants to rate themselves high on these three traits as well as on intellectual self-confidence. In addition, they were more likely than were other subgroups, or freshmen-in-general, to rate themselves high on leadership ability, public speaking ability, originality, and political liberalism. Finally, blacks were less likely than average to see themselves as stubborn and athletically able but more likely to see themselves as defensive.

American Indians

Except for those planning to become nurses, American Indians interested in health careers had a generally positive self-image, rating themselves high on academic ability, public speaking ability, understanding, popularity with the opposite sex, and intellectual and social self-confidence; they were also more inclined than was the average freshman to see themselves as stubborn. In addition, each subgroup was somewhat distinctive. Thus, American Indians planning to become physicians also rated themselves high on drive to achieve, leadership ability, mathematical ability, writing ability, political liberalism, and defensiveness. Those aspiring to other medical professions were also likely to rate themselves high on defensiveness, liberalism, writing ability, and drive to achieve; unlike aspiring physicians, however, they also saw themselves as cheerful. A rather unfavorable self-image was manifested by those planning to become nurses; on almost no traits except defensiveness and originality were they more inclined than was the average freshman to give themselves above-average ratings. American Indians planning to go into one of the allied health professions were a particularly interesting group in that they were more likely than other subgroups or freshmen-in-general to see themselves as artistically able, original, and sensitive to criticism; they also tended to give themselves high ratings on mathematical and mechanical ability, popularity, and cheerfulness.

Asian-Americans

Like American Indians, Asian-Americans were differentiated from other students by a strong belief in their academic skills, notably academic ability, mathematical ability, mechanical ability, and drive to achieve; those plan-

ning to become nurses were, as usual, an exception. Those aspiring to medicine and to allied health professions were inclined to see themselves as intellectually self-confident, whereas those interested in other medical professions matched the national norms on this trait. On the other hand, Asian-Americans were no more likely than was the average freshman to see themselves as cheerful, physically attractive, popular, popular with the opposite sex, and stubborn. Moreover, except for those planning to become physicians, they tended to give themselves rather low ratings on leadership, originality, public speaking ability, and writing ability. The impression that one gets of these students, then, is one of quiet and somewhat self-effacing competence. Those planning to become physicians were differentiated by high ratings on artistic ability, social self-confidence, and sensitivity to criticism; those aspiring to other medical professions, by political liberalism and sensitivity to criticism; and those interested in allied health professions, by defensiveness, understanding of others, and social self-confidence.

Hispanic-Americans

Hispanic-Americans aspiring to health careers tended to see themselves as cheerful, understanding, popular with the opposite sex, and motivated to achieve. In addition, those planning to become physicians or other medical professionals saw themselves as intellectually and socially self-confident leaders. This self-confidence may be somewhat unwarranted in that they were no more likely than the average freshman (or, in some cases, less likely) to give themselves high ratings on academic ability, mathematical ability, writing ability, public speaking ability, or originality. Aspiring physicians

were, to some extent, an exception, being more confident than average of their academic and mathematical ability; on the other hand, they also rated themselves high on defensiveness, as did Hispanic-Americans aspiring to the allied health professions. Those interested in other medical professions seemed the most socially self-confident, tending to give themselves higher ratings on popularity and physical attractiveness.

Summary and Discussion

Table II-2 summarizes the differences among the racial/ethnic groups in their self-ratings of three basic academic skills: academic ability, mathematical ability, and writing ability.

If we then score each racial/ethnic category within each career group in terms of their rank-order from top (scored 5) to bottom (scored 1) on each of these abilities, we obtain the scores shown in Table II-3.

Adding up the scores for each racial/ethnic category across career groups, we then arrive at a composite score for each: The possible range of this composite score is from 12 to 60. American Indians lead the others with a score of 48; next come whites (45), and then Asian-Americans (43). Blacks and Hispanic-Americans scored only 22 each, a considerable drop from the scores obtained by the other groups. Only on perceived writing ability were blacks more likely than Hispanic-Americans to rate themselves high. Considering only academic and mathematical ability, Hispanic-Americans score 15, and blacks score 9. Clearly, then, blacks had an unfavorable self-image with respect to those competencies that are most closely linked with success in college.

The five racial/ethnic categories were similarly ranked and scored on

Table II-2

Rank-Order[a] of Racial/Ethnic Groups on Self-Ratings of Basic Academic Skills, by Career Choice

Academic Ability (53.0)[b]		Mathematical Ability (33.4)[b]		Writing Ability (30.5)[a]	
Physicians					
Asian-Americans	(88.7)	Asian-Americans	(77.8)	Whites	(46.3)
Whites	(87.7)	Whites	(65.1)	American Indians	(44.7)
American Indians	(86.5)	American Indians	(59.7)	Blacks	(41.5)
Hispanic-Americans	(67.3)	Hispanic-Americans	(41.2)	Asian-Americans	(36.4)
Blacks	(64.2)	Blacks	(38.3)	Hispanic-Americans	(33.8)
Other Medical Professionals					
American Indians	(76.5)	Asian-Americans	(49.7)	American Indians	(38.1)
Whites	(71.1)	Whites	(44.9)	Blacks	(32.2)
Asian-Americans	(67.3)	American Indians	(32.1)	Hispanic-Americans	(30.8)
Hispanic-Americans	(54.4)	Hispanic-Americans	(27.8)	Whites	(30.1)
Blacks	(48.9)	Blacks	(27.8)	Asian-Americans	(26.9)
Nurses					
American Indians	(60.6)	Asian-Americans	(36.1)	American Indians	(29.1)
Asian-Americans	(60.0)	Whites	(24.2)	Blacks	(26.0)
Whites	(56.3)	American Indians	(20.7)	Whites	(25.0)
Blacks	(34.4)	Hispanic-Americans	(18.1)	Hispanic-Americans	(21.0)
Hispanic-Americans	(32.9)	Blacks	(10.9)	Asian-Americans	(19.1)
Allied Health Professionals					
Whites	(48.8)	Asian-Americans	(43.5)	American Indians	(29.0)
Asian-Americans	(45.4)	American Indians	(41.5)	Whites	(27.0)
American Indians	(42.0)	Whites	(29.7)	Asian-Americans	(25.7)
Hispanic-Americans	(28.5)	Hispanic-Americans	(19.8)	Blacks	(25.1)
Blacks	(19.4)	Blacks	(17.2)	Hispanic-Americans	(22.4)

[a]Rank-ordered by proportions rating themselves as above average or in the top 10 percent on the trait.

[b]National norm.

Table II-3

Composite Scores of Racial/Ethnic Groups of Self-Ratings on Basic Academic Skills, by Career Groups

Physicians		Other Medical Professionals		Nurses		Allied Health Professionals	
Whites	(13)	American Indians	(13)	American Indians	(13)	Whites	
Asian-Americans	(12)	Whites	(10)	Asian-Americans	(10)	Asian-Americans	(12)
American Indians	(10)	Asian-Americans	(9)	Whites	(7)	American Indians	
Hispanic-Americans	(5)	Hispanic-Americans	(7)	Blacks		Hispanic-Americans	(5)
Blacks		Blacks	(6)	Hispanic-Americans	(5)	Blacks	(4)

the three traits most characteristic of health-career aspirants: understanding, cheerfulness, and drive to achieve. The rank-orders are shown in Table II-4. The composite scores were as follows: American Indians, 42; blacks, 41; Hispanic- Americans, 40; whites, 36; Asian-Americans, 21. Somewhat paradoxically, then, three of the minority groups were more outstanding on these "typical traits" than were the "typical" health-career aspirants: i.e., the white majority.

Table II-4

Rank-Order of Racial/Ethnic Groups on Self-Ratings of Three Most Common Traits,[a] by Career Group

Understanding (65.9)[b]		Cheerfulness (52.2)		Drive to Achieve (59.9)	
Physicians					
American Indians	(84.9)	Blacks	(61.4)	American Indians	(88.3)
Blacks	(80.1)	Hispanic-Americans	(61.3)	Hispanic-Americans	(83.0)
Hispanic-Americans	(76.2)	Whites	(57.0)	Whites	(82.8)
Whites	(74.0)	American Indians	(54.7)	Asian-Americans	(81.5)
Asian-Americans	(71.2)	Asian-Americans	(50.1)	Blacks	(80.0)
Other Medical Professionals					
American Indians	(80.2)	American Indians	(67.1)	American Indians	(75.0)
Hispanic-Americans	(74.0)	Hispanic-Americans	(56.1)	Whites	(70.4)
Blacks	(65.1)	Blacks	(53.2)	Blacks	(69.7)
Whites	(63.1)	Whites	(51.9)	Hispanic-Americans	(64.6)
Asian-Americans	(62.6)	Asian-Americans	(34.1)	Asian-Americans	(63.7)
Nurses					
Hispanic-Americans	(72.0)	Whites	(62.2)	Blacks	(65.8)
Whites	(71.8)	Blacks	(62.0)	Hispanic-Americans	(65.2)
Blacks	(65.5)	Hispanic-Americans	(59.6)	Whites	(63.9)
American Indians	(62.7)	Asian-Americans	(43.7)	American Indians	(56.8)
Asian Americans	(51.7)	American Indians	(38.0)	Asian-Americans	(38.7)
Allied Health Professionals					
Asian-Americans	(76.6)	Hispanic-Americans	(63.5)	Blacks	(70.6)
American Indians	(71.3)	American Indians	(62.3)	Asian-Americans	(66.4)
Whites	(70.4)	Blacks	(59.9)	Whites	(60.9)
Blacks	(70.0)	Whites	(56.6)	American Indians	(57.0)
Hispanic-Americans	(68.4)	Asian-Americans	(53.0)	Hispanic-Americans	(45.2)

[a] Larger proportions of health-career aspirants and all freshmen rated themselves as above average or in the top 10 percent on these traits than on any others.

[b] National norm.

As was mentioned earlier, the fit between the characteristics of the individual student and those of the majority of students in a given field largely determines whether that individual student will survive in the field or will defect from it. Obviously, academic skills, along with drive to achieve, are much more closely related to success in college than are such traits as understanding and cheerfulness, and this holds true whatever the student's major field of study. At the same time, some major fields are more demanding than others in the difficulty of the material covered, and the educational requirements of some careers are heavier than those of others in both their substantive difficulty and the amount of time they require. From this standpoint, medicine is the most demanding of the health fields, whereas nursing and health technology may be the least demanding (insofar as they may require no more than an associate degree). It comes as no surprise, then, that students planning to go into medical professions tended to give themselves higher ratings on academic skills than did students planning to go into NAH professions, and that this difference between aspirants to the two groups of careers was found for all racial/ethnic categories. Nonetheless, Asian-Americans and American Indians in each career group were closer to whites in their self-ratings of academic skills than were blacks and Hispanic-Americans and thus would seem to have a better chance of staying in these fields, and particularly in the medical professions.

The self-perceived academic inferiority of blacks and Hispanic-Americans aspiring to NAH professions may not be so damaging to their chances. In particular, nursing would seem to be one career choice where academic ability, mathematical ability, and writing ability are of less importance than are such character attributes as understanding, cheerfulness, and drive to

achieve; and on these traits, blacks and Hispanic-Americans planning to become nurses were clearly superior, each scoring 12 (as did whites), compared with a score of 5 for American Indians and a score of 4 for Asian-Americans. Thus, blacks and Hispanic-Americans seem more likely to persist in the career choice of nursing than in other health fields.

Life Goals

While the self-ratings of students interested in health careers differed from those of all freshmen in certain consistent ways, their life goals varied, to some degree, by career group, reflecting basic differences in the demands and emphases of the different health fields. Among all freshmen, the life goals most frequently endorsed as very important or essential were as follows (with sex differences as noted):

	All	Men	Women
Becoming an authority in field	62.2	66.5	57.7
Helping others in difficulty	61.3	52.9	70.4
Developing a meaningful philosophy of life	61.1	57.4	65.1
Raising a family	55.0	53.3	56.9
Being very well-off financially	45.8	54.4	36.4

Health-career aspirants gave top priority to the same five life goals, though in slightly different order. The following summary indicates the order (ranked in terms of the endorsements of the total career group, as reported in Volumes I and II; see Holmstrom, Knepper and Kent, 1976a and 1976b) and describes differences among the career groups:

1. Helping others in difficulty: regarded as more important by

students interested in health careers that involve working directly with people (therapists, nurses, physicians) than by those interested in careers that involve working with animals and things (veterinarians, pharmacists, optometrists, lab technicians, dietitians). Those planning to become dentists (a career that does, of course, require working with people) were no more likely than average to value helping others in difficulty, but a closer look at the figures shows that men planning to become dentists were more likely than was the average male freshman to endorse this life goal; nonetheless, aspiring dentists were somewhat more concerned with material success than were other groups aspiring to health careers.

2. Developing a meaningful philosophy of life: more likely to be endorsed by aspiring physicians and therapists than by other career groups.

3. Becoming an authority in field: especially important to aspiring physicians and veterinarians but relatively unimportant to aspiring nurses and health technicians.

4. Raising a family: most likely to be given high priority by aspiring nurses, dietitians, therapists and least likely to be regarded as important by aspiring veterinarians.

5. Being very well-off financially: considered very important by higher-than-average proportions of aspiring dentists, pharmacists, and optometrists but by lower-than-

average proportions of aspiring nurses, dietitians, and therapists.

In addition, health-career aspirants were less likely than freshmen-in-general to value influencing the political structure, keeping up-to-date with politics, and achieving in the arts, the only exceptions being that 43.1 percent of aspiring physicians were interested in keeping up with politics and that 23.6 percent of aspiring dietitians wanted to create artistic works. Occupational achievement goals (winning recognition from colleagues, making a theoretical contribution to science) were more important to those interested in medical professions (especially aspiring physicians) than to those interested in the NAH professions. Finally, succeeding in their own business was more important to those planning on medical careers, especially aspiring veterinarians, dentists, optometrists, and pharmacists--all of whom would anticipate building their own practice or business rather than working within a larger organizational structure. (See Holmstrom, Knepper, and Kent, 1976a and 1976b for fuller details.)

As Table II-5 shows, minority students tended to give preference to the same life goals as health-career aspirants generally. The top-ranked goal for all groups was helping others in difficulty. Developing a meaningful philosophy of life ranked second among whites and American Indians and third among the other minority groups. Becoming an authority in the field was the third most important to whites and American Indians and second most important to the others. Raising a family ranked fourth among whites and Hispanic-Americans, fifth among blacks and American Indians, and was not among the top five life goals of Asian-Americans. Being very well-off financially ranked fifth among whites and Hispanic-Americans, fourth among blacks and

Table II-5

The Five Top-Ranked Life Goals[a] of Each Racial/Ethnic Group of 1974 Health-Career Aspirants and of All 1974 Freshmen

Whites	Blacks	American Indians	Asian-Americans	Hispanic-Americans	All Freshmen
Helping others in difficulty	Helping others in difficulty	Helping others in difficulty	Helping others in difficulty	Helping others in difficulty	Becoming an authority in my field
Developing a meaningful philosophy of life	Becoming an authority in my field	Developing a meaningful philosophy of life	Becoming an authority in my field	Becoming an authority in my field	Helping others in difficulty
Becoming an authority in my field	Developing a meaningful philosophy of life	Becoming an authority in my field	Developing a meaningful philosophy of life	Developing a meaningful philosophy of life	Developing a meaningful philosophy of life
Raising a family	Being well-off financially	Obtaining recognition from my colleagues	Being well-off financially	Raising a family	Raising a family
Being well-off financially	Raising a family	Raising a family	Being successful in a business of my own	Being well-off financially	Being well-off financially

[a]Rank-ordered by proportions rating the goal essential or very important.

Asian-Americans, and was not among the top five goals of American Indians, who instead gave precedence to obtaining recognition from colleagues (ranked fourth). Finally, succeeding in a business of their own was ranked fifth by Asian-Americans.

The following section profiles each minority group in terms of its life goals, comparing the different racial/ethnic categories of health-career aspirants. (For the life goals of the white majority and more detailed tables for each of the minority groups see Summary Tables II-F through II-J at the end of the chapter.)

Blacks

Blacks among health-career aspirants gave top priority to the same five goals as others though they tended to be more concerned than were other minorities or the white majority with becoming an authority in their field and being very well-off financially and somewhat less concerned than were American Indians or Hispanic-Americans with helping others and developing a philosophy of life. Indeed, larger proportions (61 percent) of blacks

aspiring to other medical professions and to allied health professions than most of the other minority health aspirants gave high priority to making lots of money. Moreover, as was generally true of minority health-career aspirants, they were somewhat more concerned than were their white counterparts with receiving recognition from colleagues, having administrative responsibility over others, influencing the political structure, influencing social values, and participating in community action programs.

Blacks aspiring to different health fields had somewhat different life goals. Thus, aspirants to medical careers were more likely than aspirants to NAH professions to be concerned with the occupational achievement goals of becoming an authority in the field and obtaining recognition from colleagues for contributions to the field. Those planning to become physicians were more likely than other career groups to emphasize making a theoretical contribution to science, keeping up with political affairs, and helping others and less likely to emphasize being very well-off financially. Those interested in other medical professions gave high priority to succeeding in their own business. Like black aspiring physicians, black aspiring nurses were more concerned than aspirants to other medical professions and allied health professions with helping others in difficulty; they were also more likely than other groups of blacks to want administrative responsibility over others. But they were relatively unconcerned with influencing the political structure, making a theoretical contribution to science, being successful in their own business, participating in community action programs, and keeping up-to-date with politics. Except for their emphasis on financial success, blacks aspiring to allied health professions were not particularly distinguished from blacks in other career groups.

American Indians

American Indians were distinguished from other minority health-career aspirants in their emphasis on developing a meaningful philosophy of life, influencing social values, cleaning up the environment, becoming accomplished in a performing art, and writing original works. Moreover, except for those interested in nursing (who constituted about two in five of the American Indians aspiring to health careers), they were more interested than other minorities in making a theoretical contribution to science and obtaining recognition from colleagues for contributions to their field. They gave less emphasis than did others to raising a family and to having administrative responsibility over others.

Again, there were differences among the career groups, with aspiring physicians among American Indians having the most emphasis, and aspiring nurses the least, to influencing the political structure, influencing social values, and keeping up-to-date with politics. Indeed, larger proportions of American Indians planning to become physicians than of any other minority group aspiring to any other career endorsed these three goals as essential or very important. Those interested in other medical professions were much more likely than others to be concerned with succeeding in their own business but less concerned than any other group with raising a family and having administrative responsibility over others. Aspiring nurses were more likely than other subgroups of American Indians to endorse the life goal of raising a family as very important; they were much less interested in influencing the political structure, being very well-off financially, making a theoretical contribution to science, writing original works, succeeding in their own

business, and cleaning up the environment. Moreover, only about half were concerned with developing a meaningful philosophy of life, in contrast with over four-fifths of American Indians interested in other health careers. Finally, American Indians who were interested in allied health professions (though they constituted only 17 percent of American Indians aspiring to health careers) were outstanding in that larger proportions than of any other minority subgroup gave high priority to developing a meaningful philosophy of life, having administrative responsibility over others, and cleaning up the environment. Moreover, about one in four were interested in artistic achievement: becoming accomplished in a performing art, writing original works, and creating artistic works.

Asian-Americans

Like American Indians, Asian-Americans among health-career aspirants were particularly concerned with obtaining recognition from colleagues (though this was not true of the very small proportion of those aspiring to allied health professions). Otherwise, generally smaller proportions of Asian-Americans than of other minorities endorsed most of the life goals, a tendency which aligns them with the white majority. For instance, they showed relatively little interest in social/political goals.

Again, there were strong differences by career group, with Asian-Americans planning to become physicians and nurses giving strong emphasis to helping others. Moreover, three in four of the aspiring physicians (but only about half of other career groups) wanted to develop a meaningful philosophy of life. Half of the Asian-Americans aspiring to medicine (more than any minority group aspiring to any other health career) gave high pri-

ority to making a theoretical contribution to science. Those aspiring to other medical professions were more concerned than other Asian-Americans with status and material success (obtaining recognition, succeeding in their own business, and being very well-off financially) but less concerned than any minority subgroup with helping others and participating in community action programs. But they, along with Asian-Americans aspiring to allied health professions, were inclined to emphasize creating artistic works. Those planning to become nurses differed from others by their failure to emphasize certain goals: For instance, in sharp contrast to other racial/ethnic groups interested in nursing, fewer than one in three was concerned with raising a family, and they were least likely of any subgroup to value keeping up-to-date with political affairs. Asian-Americans aspiring to the allied health professions seemed to be more social-minded than others in that larger proportions (44 percent) than of any other racial/ethnic group aspiring to any other career endorsed participating in community action programs and in programs to clean up the environment. Only one in five was concerned about receiving recognition from colleagues, and fewer than 1 percent wanted to influence the political structure.

Hispanic-Americans

The similarity between blacks and Hispanic-Americans noted earlier with respect to self-ratings was also apparent, though to a lesser extent, in their life goals. It may be that both racial/ethnic groups are a little more flamboyant in their response style--that is, more inclined to endorse a number of goals--than are Asian-Americans, whites, and American Indians. For instance, larger proportions of Hispanic-Americans than of any other

group endorsed helping others and making a theoretical contribution to science; and they, along with blacks, led the others in giving high priority to becoming an authority in their field, developing a meaningful philosophy, raising a family, having administrative responsibility over others, and influencing the political structure. On the other hand, they were less concerned than were other minorities with receiving recognition, participating in community action programs, or achieving in the arts.

Hispanic-Americans planning to become physicians were outstanding in several ways: Over nine in ten (more than any other racial/ethnic subgroup in any career choice) said that helping others in difficulty was very important to them; they were also more likely than any other group of Hispanic-American health-career aspirants to endorse keeping up-to-date with political affairs and making a theoretical contribution to science; and they (along with aspiring nurses) gave high precedence to raising a family. Hispanic-Americans interested in allied health professions were much more likely than their counterparts interested in other careers to value succeeding in their own business; in addition, about one in seven wanted to become accomplished in one of the performing arts. Aspiring nurses among Hispanic-Americans were less likely than others to be concerned with developing a meaningful philosophy, participating in community action programs, and becoming an authority in their field, whereas those interested in the allied health professions were most likely of any group, across racial/ethnic and career categories, to value being an authority in their field.

Summary and Discussion

Table II-6 indicates the rank-order of the different racial/ethnic groups

Table II-6

Rank Order[a] of Racial/Ethnic Groups on Four Types of Life Goals

EXPRESSIVE/ALTRUISTIC GOALS			MATERIALISTIC LIFE GOALS	
Helping Others in Difficulty	Develop Meaningful Philosophy of Life	Raising Family	Being Well-Off Financially	Being Successful in Own Business
Hispanic-Americans	American Indians	Whites	Blacks	Asian-Americans
American Indians	Hispanic-Americans	Blacks	Asian-Americans	Hispanic-Americans
Blacks	Blacks	Hispanic-Americans	Hispanic-Americans	American Indians
Asian-Americans	Whites	Asian-Americans	American Indians	Blacks
Whites	Asian-Americans	American Indians	Whites	Whites

ACHIEVEMENT-ORIENTED GOALS			SOCIAL ACTION GOALS	
Becoming Authority in Field	Obtaining Recognition From Colleagues	Making Theoretical Contribution to Science	Working in Programs to Clean Up the Environment	Participating in Community Action Programs
Hispanic-Americans	Blacks	Hispanic-Americans	Blacks	American Indians
Blacks	American Indians	American Indians	American Indians	Blacks
American Indians	Asian-Americans	Blacks	Hispanic-Americans	Asian-Americans
Whites	Hispanic-Americans	Asian-Americans	Asian-Americans	Hispanic-Americans
Asian-Americans	Whites	Whites	Whites	Whites

[a]Rank-ordered by proportions rating the goal essential or very important.

on key categories of life goals (i.e., expressive/altruistic, achievement-oriented, materialistic, and social-action goals) that were frequently mentioned by health-career aspirants.

Using the same scoring scheme described earlier (5 for top rank and 1 for bottom rank), we see that Hispanic-Americans and American Indians lead others in two out of three expressive/altruistic life goals. When the life goal of raising a family is excluded from this category, Hispanic-Americans and American Indians both score 9, followed by blacks, who score 6; Asian-Americans and whites, on the other hand, score only 3.

Hispanic-Americans and blacks lead others in achievement-oriented life

goals (scoring 12 each), followed by American Indians (11), Asian-Americans (6) and whites (4). Asian-Americans lead others in materialistic life goals (9), followed by Hispanic-Americans and blacks (7 each), American Indians (5) and whites (2). Finally, blacks and American Indians lead others in social-action goals (scoring 9 each), followed by Hispanic-Americans and Asian-Americans (5 each), with whites scoring lowest (2). Looking at the composite scores obtained by totaling across all life-goal categories shown in table 11-6, we see that blacks lead others with a total score of 38, followed by Hispanic-Americans (36) and American Indians (35). Asian-Americans have an overall score of 25 and whites only 16. Thus, Asian-Americans are the minority group that most closely resemble the white majority among health-career aspirants in that they tended to have a somewhat narrower range of life goals--or a more restrained response style--than did blacks, Hispanic-Americans, and American Indians. They differed from whites only in giving somewhat greater emphasis to artistic goals and markedly less emphasis to developing a meaningful philosophy of life and raising a family--a life goal that was more important to whites than to any of the minority groups. American Indians differed from whites more in their life goals than in their self-ratings, except that, like whites, they were less likely than were other minority groups to give high priority to being very well-off financially. Blacks resembled whites in giving relatively little emphasis to cleaning up the environment and succeeding in their own business. Hispanic-Americans were closest to whites in being less likely than others to emphasize receiving recognition from colleagues.

Blacks and Hispanic-Americans were farther apart in their life goals than in their self-ratings, although both racial/ethnic groups were some-

what similar in the frequency with which they endorsed a number of life goals as very important. They were more likely than were others to value having administrative responsibility and influencing the political structure. In addition, Hispanic-Americans were similar to American Indians in their concern with helping others, developing a meaningful philosophy of life, and succeeding in their own business. Overall, however, minority students interested in health careers endorsed the same life goals as did the white majority, and the differences described here are differences in degree rather than kind.

Reasons for Career Choice

Students were asked to indicate how important each of 12 reasons was in their choice of a particular career. The following highlights some of the differences between all freshmen and health-career aspirants and the differences among aspirants to various health careers in their responses to this question.

1. Intrinsic interest: the top-ranked reason among freshmen-in-general, 67.4 percent of whom said this was very important to them; larger proportions of aspiring physicians, veterinarians, nurses, dietitians, health technicians, and therapists than of all freshmen or aspiring dentists, pharmacists, and optometrists endorsed this reason.
2. Can be helpful to others: very important to 61.8 percent of all freshmen and to over 70 percent of all health-career aspirants except those interested in pharmacy. For instance, about nine in ten aspiring nurses, therapists, and physicians cited this reason.

3. Able to work with people: endorsed by 61.3 percent of all freshmen, but by at least seven in ten aspiring physicians, dentists, optometrists, and dietitians, and nine in ten aspiring nurses and therapists. On the other hand, aspiring health technicians, pharmacists, and veterinarians were at or below the national norm.
4. Chance for steady progress: more frequently judged to be very important by all freshmen (48.7 percent) than by health-career aspirants, except aspiring dentists.
5. Can make an important contribution to society: judged to be very important by 47.2 percent of all freshmen and by even larger proportions of health-career aspirants, with the exception of aspiring pharmacists and dietitians. But about three in four aspiring physicians, nurses, and therapists cited this factor.
6. Job openings generally available: very important to 46.8 percent of all freshmen and to at least three in five of the students interested in NAH professions and in pharmacy; only to aspiring physicians and veterinarians was job availability relatively unimportant.

In addition, high anticipated earnings were more important to aspiring dentists, pharmacists, optometrists, and health technicians than to all freshmen or to other groups of health-career aspirants; rapid advancement was more important to aspiring dentists than to others; and the prestige of the profession was mentioned by larger proportions of aspiring medical professionals (except veterinarians) and nurses than of freshmen-in-general, but

by smaller proportions of students interested in allied health professions. Having a "great deal of independence" was much more likely to be cited by those aspiring to medical professions (except pharmacists) than by those aspiring to NAH professions. Aspiring dietitians, dentists, and optometrists were more likely than others to regard avoiding pressure as an important factor. Finally, smaller proportions of health-career aspirants than of all freshmen mentioned the chance to work with ideas, the single exception being aspiring dietitians.

In summary, while freshmen-in-general tended to cite altruistic/social reasons (as well as intrinsic interest) for their career choice, this tendency was even more characteristic of students interested in health careers, with the exceptions noted. Table II-7 shows the five reasons most frequently cited as very important to their career choice by each racial/ethnic category of health-career aspirants and by all freshmen.

Table II-7

The Five Top-Ranked Reasons for Career Choice* of Each Racial/Ethnic Group of 1974 Health Career Aspirants and of All Freshmen

Whites	Blacks	American Indians	Asian-Americans	Hispanic-Americans	All Freshmen
Chance to be helpful to others	Chance to be helpful to others	Chance to be helpful to others	Chance to be helpful to others	Chance to be helpful to others	Intrinsic interest in the field
Ability to work with people	Ability to work with people	Ability to work with people	Ability to work with people	Ability to work with People	Chance to be helpful to others
Intrinsic interest in the field	Intrinsic interest in the field	Intrinsic interest in the field	Intrinsic interest in the field	Intrinsic interest in the field	Ability to work with people
Chance to make an important contribution to society	Chance to make an important contribution to society	Chance to make an important contribution to society	Chance to make an important contribution to society	Chance to make an important contribution to society	Chance to make an important contribution to society
Job openings generally available	Job openings generally available	Job openings generally available	Job openings generally available	Job openings generally available	Job openings generally available

*Rank-ordered by proportions indicating reason was very important.

What is most striking about this rank-ordering is the overwhelming consensus among health-career aspirants on their reasons for naming a particular career. All five racial/ethnic groups gave the same five reasons in virtually the same order, except, of course, proportions endorsing each reason varied

somewhat. These relative differences are summarized in Table II-8 and discussed in the following profiles. (Figures for whites and more detailed figures for each of the minority groups are shown in summary tables II-K through II-O at the end of the chapter.) Blacks, American Indians, and Hispanic-Americans were very similar in their ranking of the five most important reasons (obtaining composite scores of 20, 20, and 19, respectively), while Asian-Americans differed most with a composite score of 5. Whites earned a score of 11 and fell somewhere between Asian-Americans and other minorities.

Table II-8

Rank-Order of Racial/Ethnic Groups on Five Most Common Reasons for Career Choice[a]

Chance to be helpful to others	Ability to work with people	Intrinsic interest in the field	Chance to make an important contribution to society	Job openings generally available
Hispanic-Americans	Blacks	American Indians	American Indians	Blacks
Blacks	Hispanic-Americans	Hispanic-Americans	Blacks	American Indians
American Indians	American Indians	Whites	Hispanic-Americans	Hispanic-Americans
Whites	Whites	Blacks	Whites	Whites
Asian-Americans	Asian-Americans	Asian-Americans	Asian-Americans	Asian-Americans

[a]Rank-ordered by proportions indicating reason was very important.

Blacks

Blacks led all other racial/ethnic groups in endorsing as very important to their career choice the ability to work with people and the availability of jobs (Table II-8). In addition, over four in five cited the chance to be helpful to others, though they trailed slightly behind Hispanic-Americans on this reason; and over seven in ten cited the chance to contribute to society, though they trailed behind American Indians on this reason.

Blacks were more likely than all others to cite instrumental and practical factors as very important to their choice of career. These factors were (in order of the proportion of blacks citing them): the availability

of jobs, the chance for steady progress, high anticipated earnings, the prestige of the profession, and the chance for rapid advancement. Finally, they were also more likely than were other racial/ethnic groups to cite the chance for independence and avoidance of pressure.

American Indians

As Table II-8 indicates, intrinsic interest in the field was more frequently cited by American Indians than by any other racial/ethnic group (although the proportions were very close for each group except Asian-Americans). The chance to make an important contribution to society was also more important to American Indians (except those aspiring to allied health professions) than to others. The chance to be helpful to others and ability to work with people were cited by larger proportions of American Indians than of Asian-Americans and whites but by slightly smaller proportions than of blacks and Hispanic-Americans.

American Indians were more likely than any other racial/ethnic group except blacks to cite job availability and high earnings as important to their career choice, but less likely than any group except whites to mention the prestige of the profession and the chance for steady progress. They were also more likely than all others except blacks to cite having a great deal of independence (which was especially important to those aspiring to other medical professions) and working with ideas. This last reason, however, was endorsed by only one in four of the American Indians interested in nursing, compared with about half of those interested in other health careers and 44.1 percent of all freshmen.

Asian-Americans

Although Asian-Americans gave top priority to the same five reasons

as were mentioned by other health-career aspirants, smaller proportions endorsed each (Table II-8). Nonetheless, about three in four mentioned the chance to be helpful to others and the ability to work with people; and over half mentioned intrinsic interest, the opportunity to contribute to society, and the availability of jobs as very important. There was considerable variation among the four career groups of Asian-Americans in the proportions citing each reason; for instance, those interested in other medical professions were particularly likely to mention such altruistic reasons as making a contribution to society and being helpful to people. In addition, over three in four of Asian-Americans aspiring to medicine, but fewer than half of those aspiring to nursing, mentioned intrinsic interest. This variability among the career groups may partly explain why Asian-Americans trailed other minority groups and were generally closer to the white majority.

Hispanic-Americans

Close to nine in ten Hispanic-Americans--more than any other group--cited the chance to be helpful to others as very important in their career choice (Table II-8). They were also more likely than any group except blacks to cite their ability to work with people. Moreover, except for those interested in allied health professions, they were more concerned than others with making an important contribution to society.

The instrumental reasons of rapid advancement, steady progress, and prestige were more important to Hispanic-Americans than to any other racial/ethnic group except blacks, but except for those aspiring to other medical professions, Hispanic-Americans were relatively unconcerned with high anti-

cipated earnings. Those interested in medical professions were more likely than average, and those interested in NAH professions less likely, to cite the chance for independence as important in their career choice.

Summary and Discussion

There was considerable consensus among various racial/ethnic categories of health-career aspirants about their reasons for naming a particular career; though the proportions varied, the rank ordering of the different reasons was fairly stable from one group to another.

Overall, minority students were more interested than white students in instrumental and practical factors such as job availability, high earnings, rapid advancement, and steady progress. Moreover, all except Asian-Americans were more apt than the white majority to cite altruistic reasons and ability to work with people. It is rather instructive, in comparing the different groups, to note the proportion of aspiring nurses in each who cited the prestige of the profession as a factor in their choice: Only one in three of the white aspiring nurses, but about half the American Indians, Asian-Americans and Hispanic-Americans and 54.3 percent of the blacks, said this was a very important reason. Similar comparisons reveal differences not only in the values of the different groups but also in their perceptions of the different careers.

To summarize: In their reasons for career choice, blacks and Hispanic-Americans were highly similar to one another; Asian-Americans and whites resembled one another; and American Indians were somewhere in between.

Table II-A

Self-Ratings[a] of Whites Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Academic ability	87.7	71.1	48.8	56.3
Athletic ability	41.3	43.2	22.8	29.1
Artistic ability	21.5	18.1	13.3	16.5
Cheerfulness	57.0	51.9	62.2	56.6
Defensiveness	27.6	28.3	24.7	25.2
Drive to achieve	82.8	70.4	63.9	60.9
Leadership ability	60.2	45.4	34.2	36.8
Mathematical ability	65.6	44.9	24.2	29.7
Mechanical ability	34.2	29.2	8.3	13.0
Originality	48.9	37.8	28.4	32.6
Physical attractiveness	34.8	28.3	20.5	21.9
Political conservatism	16.3	11.8	7.3	7.5
Political liberalism	27.4	18.6	12.1	15.4
Popularity	40.4	32.8	25.0	26.8
Popularity with opposite sex	45.6	39.3	23.0	24.6
Public speaking ability	34.7	20.8	14.3	16.5
Intellectual self-confidence	68.2	48.5	29.6	33.4
Social self-confidence	44.3	36.7	29.5	29.6
Sensitivity to criticism	28.0	24.3	23.3	26.7
Stubbornness	42.3	40.7	34.8	37.1
Understanding of others	74.0	63.1	71.8	70.4
Writing ability	46.3	30.1	25.0	27.0

[a]Proportion rating themselves as above-average or in the top 10 percent.

Table II-8

Self-Ratings[a] of Blacks Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Academic ability	64.2	48.9	19.4	34.4
Athletic ability	36.7	33.5	17.2	31.4
Artistic ability	21.5	18.1	9.9	11.6
Cheerfulness	61.4	53.2	62.0	59.9
Defensiveness	34.8	33.3	28.3	39.0
Drive to achieve	80.0	69.7	65.8	70.6
Leadership ability	54.0	42.8	32.3	39.7
Mathematical ability	38.3	27.8	10.9	17.2
Mechanical ability	20.4	13.0	3.9	10.5
Originality	50.4	41.9	24.2	31.7
Physical attractiveness	37.0	38.1	27.9	34.9
Political conservatism	9.0	5.8	4.7	5.6
Political liberalism	29.4	25.0	7.8	13.6
Popularity	40.6	36.2	26.4	29.7
Popularity with opposite sex	45.6	39.3	29.9	37.1
Public speaking ability	34.4	24.0	15.1	20.8
Intellectual self-confidence	61.2	52.3	35.3	43.2
Social self-confidence	52.2	46.1	34.6	42.2
Sensitivity to criticism	22.4	25.8	17.7	21.8
Stubbornness	35.6	27.2	22.8	24.8
Understanding of others	80.1	65.1	65.5	70.0
Writing ability	41.5	32.2	26.0	25.1

[a]Proportion rating themselves as above-average or in the top 10 percent.

Table II-C

Self-Ratings[a] of American Indians Among 1974 Health-Career Aspiriants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Academic ability	86.5	76.5	42.0	60.6
Athletic ability	42.3	40.1	29.2	30.9
Artistic ability	18.5	19.9	19.9	42.6
Cheerfulness	54.7	67.1	38.0	62.3
Defensiveness	38.0	36.4	30.9	28.6
Drive to achieve	88.3	75.0	56.8	57.0
Leadership ability	59.5	45.3	36.5	38.4
Mathematical ability	59.7	32.1	20.7	41.5
Mechanical ability	24.3	19.7	13.0	28.5
Originality	48.4	47.1	40.8	65.5
Physical attractiveness	26.0	22.4	15.3	24.5
Political conservatism	13.0	11.6	5.3	1.8
Political liberalism	37.2	29.0	16.5	22.3
Popularity	31.3	35.7	20.3	37.3
Popularity with opposite sex	35.7	44.7	24.9	39.0
Public speaking ability	37.6	42.4	11.3	34.3
Intellectual self-confidence	68.5	64.7	19.5	54.4
Social self-confidence	43.0	50.0	17.2	35.0
Sensitivity to criticism	35.9	24.3	17.7	43.2
Stubbornness	49.1	67.7	37.6	67.6
Understanding of others	84.9	80.2	62.7	71.3
Writing ability	44.7	38.1	29.1	29.0

[a]Proportion rating themselves as above-average or in the top 10 percent.

Table II-D

Self-Ratings[a] of Asian-Americans Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Academic ability	88.7	67.3	45.4	60.0
Athletic ability	41.3	43.2	14.7	43.0
Artistic ability	33.5	22.8	18.5	10.7
Cheerfulness	50.1	34.1	43.7	53.0
Defensiveness	27.7	16.1	12.0	36.5
Drive to achieve	81.5	63.7	38.7	66.4
Leadership ability	48.5	29.2	14.9	29.1
Mathematical ability	77.8	49.7	36.1	43.5
Mechanical ability	40.0	30.3	16.9	26.6
Originality	48.2	29.2	31.3	41.1
Physical attractiveness	29.1	28.0	22.1	24.5
Political conservatism	13.9	11.4	4.9	2.4
Political liberalism	27.6	34.3	8.9	17.8
Popularity	32.7	27.6	8.8	24.7
Popularity with opposite sex	28.8	17.0	13.5	28.8
Public speaking ability	22.7	10.1	4.7	11.9
Intellectual self-confidence	73.0	39.3	31.0	48.7
Social self-confidence	42.4	32.2	22.9	41.7
Sensitivity to criticism	34.4	31.4	18.7	22.9
Stubbornness	32.7	32.9	10.2	35.7
Understanding of others	71.2	62.6	51.7	76.6
Writing ability	36.4	26.9	19.1	25.7

[a]Proportion rating themselves as above-average or in the top 10 percent.

Table II-E

Self-Ratings[a] of Hispanic-Americans Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Academic ability	67.3	54.4	28.5	32.9
Athletic ability	41.2	40.9	22.6	19.7
Artistic ability	16.5	22.5	15.6	10.4
Cheerfulness	61.3	56.1	59.6	63.5
Defensiveness	42.7	22.4	24.4	37.4
Drive to achieve	83.0	64.6	65.2	45.2
Leadership ability	55.0	56.4	16.3	43.0
Mathematical ability	41.2	27.8	18.1	19.8
Mechanical ability	29.2	25.2	12.8	18.0
Originality	42.9	43.3	28.8	27.1
Physical attractiveness	26.9	33.0	17.8	30.3
Political conservatism	9.6	11.9	6.1	11.8
Political liberalism	22.8	19.0	5.8	18.6
Popularity	31.2	38.1	12.5	36.5
Popularity with opposite sex	39.6	35.5	20.0	44.8
Public speaking ability	27.0	22.3	13.6	24.4
Intellectual self-confidence	67.8	49.9	38.1	34.8
Social self-confidence	51.7	50.2	33.2	27.2
Sensitivity to criticism	21.1	23.9	15.8	26.8
Stubbornness	40.3	41.7	29.4	36.4
Understanding of others	76.2	74.0	72.0	68.4
Writing ability	33.8	30.8	21.0	22.4

[a]Proportion rating themselves as above-average or in the top 10 percent.

Table II-F

Life Goals[a] of Whites Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Professionals	Nurses	Allied Health Professionals
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	8.7	6.7	6.2	7.5
Becoming an authority in my field	72.5	66.5	53.5	56.3
Obtaining recognition from my colleagues for contributions to my special field	46.3	40.4	30.1	34.3
Influencing the political structure	11.8	9.9	5.3	5.4
Influencing social values	25.7	19.9	26.4	23.6
Raising a family	52.8	54.8	66.2	62.4
Having administrative responsibility for the work of others	19.5	20.7	25.4	21.2
Being very well-off financially	40.8	52.8	31.4	36.0
Helping others who are in difficulty	81.1	59.3	87.7	74.1
Making a theoretical contribution to science	39.1	24.7	14.2	15.8
Writing original works (poems novels, short stories, etc.)	9.5	6.9	6.1	7.4
Creating artistic work (painting, sculpture, decorating, etc.	7.9	8.4	7.8	13.6
Being successful in a business of my own	45.1	68.1	10.4	23.6
Becoming involved in programs to clean up the environment	25.4	27.6	18.2	22.2
Developing a meaningful philosophy of life	71.0	59.0	63.4	62.3
Participating in a community action program	32.7	25.4	29.8	29.9
Keeping up to date with political affairs	43.8	32.8	28.5	30.8

[a]Proportion indicating life goal was essential or very important.

Table II-6

Life Goals[a] of Blacks Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	9.2	10.6	9.2	9.6
Becoming an authority in my field	74.8	72.4	60.0	66.0
Obtaining recognition from my colleagues for contributions to my special field	51.2	50.9	42.6	43.2
Influencing the political structure	16.6	16.0	9.1	13.1
Influencing social values	35.4	25.7	30.1	32.5
Raising a family	55.9	54.8	58.5	54.2
Having administrative responsibility for the work of others	27.2	28.1	38.7	31.7
Being very well-off financially	54.4	61.2	59.6	61.1
Helping others who are in difficulty	85.0	69.5	80.8	72.6
Making a theoretical contribution to science	48.2	33.9	23.1	28.0
Writing original works (poems novels, short stories, etc.)	12.3	12.8	7.4	7.9
Creating artistic work (painting, sculpture, decorating, etc.	8.1	9.5	7.9	10.4
Being successful in a business of my own	47.3	61.0	22.6	35.2
Becoming involved in programs to clean up the environment	27.4	30.8	26.7	24.4
Developing a meaningful philosophy of life	69.1	66.7	60.3	65.2
Participating in a community action program	41.0	37.1	31.5	40.2
Keeping up to date with political affairs	41.0	35.3	27.3	31.4

[a]Proportion indicating life goal was essential or very important.

Table II-H

Life Goals[a] of American Indians Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	15.3	11.5	6.3	27.9
Becoming an authority in my field	67.1	68.8	57.5	63.4
Obtaining recognition from my colleagues for contributions to my special field	49.2	54.0	24.7	53.0
Influencing the political structure	24.4	12.4	5.0	7.3
Influencing social values	45.6	31.9	24.5	39.0
Raising a family	38.4	31.7	58.0	44.9
Having administrative responsibility for the work of others	27.5	18.8	23.9	43.0
Being very well-off financially	42.7	49.4	37.3	53.0
Helping others who are in difficulty	86.7	71.4	84.4	77.5
Making a theoretical contribution to science	41.3	36.4	17.5	44.9
Writing original works (poems novels, short stories, etc.)	16.5	17.6	3.5	24.6
Creating artistic work (painting, sculpture, decorating, etc.	16.2	17.4	14.4	25.6
Being successful in a business of my own	42.7	79.1	14.4	36.2
Becoming involved in programs to clean up the environment	34.6	40.7	15.4	44.2
Developing a meaningful philosophy of life	81.6	82.2	52.2	83.0
Participating in a community action program	41.0	42.5	29.2	38.3
Keeping up to date with political affairs	58.5	33.7	26.2	33.9

[a]Proportion indicating life goal was essential or very important.

Table II-1

Life Goals[a] of Asian-Americans Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	11.4	10.0	9.0	10.8
Becoming an authority in my field	64.5	64.4	58.8	59.4
Obtaining recognition from my colleagues for contributions to my special field	48.9	54.5	45.1	19.9
Influencing the political structure	12.5	7.6	8.3	.5
Influencing social values	28.6	21.9	25.0	22.2
Raising a family	51.2	59.0	32.9	44.1
Having administrative responsibility for the work of others	28.4	24.8	33.2	22.2
Being very well-off financially	51.1	61.8	47.4	46.0
Helping others who are in difficulty	81.4	64.1	83.7	74.5
Making a theoretical contribution to science	50.1	27.6	26.5	19.0
Writing original works (poems novels, short stories, etc.)	12.1	16.8	9.1	14.3
Creating artistic work (painting, sculpture, decorating, etc.	16.4	23.8	11.9	22.9
Being successful in a business of my own	48.2	71.1	34.9	40.2
Becoming involved in programs to clean up the environment	34.8	30.9	22.9	44.2
Developing a meaningful philosophy of life	74.3	48.9	52.2	55.4
Participating in a community action program	38.4	25.7	26.7	44.7
Keeping up to date with political affairs	36.6	23.8	18.5	44.3

[a]Proportion indicating life goal was essential or very important.

Table II-J

Life Goals[a] of Hispanic-Americans Among 1974 Health Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	9.6	13.7	8.0	1.6
Becoming an authority in my field	68.6	57.5	53.4	76.0
Obtaining recognition from my colleagues for contributions to my special field	43.4	47.7	41.3	34.0
Influencing the political structure	16.0	13.6	9.2	15.3
Influencing social values	29.7	30.5	34.2	25.8
Raising a family	60.7	45.6	60.8	50.2
Having administrative responsibility for the work of others	30.5	33.1	36.4	27.2
Being very well-off financially	46.5	55.9	47.3	51.2
Helping others who are in difficulty	92.4	71.4	85.0	85.8
Making a theoretical contribution to science	47.7	42.3	28.6	28.7
Writing original works (poems novels, short stories, etc.)	11.8	7.3	5.0	12.4
Creating artistic work (painting, sculpture, decorating, etc.	9.2	6.2	8.1	10.0
Being successful in a business of my own	46.0	72.6	21.1	31.5
Becoming involved in programs to clean up the environment	32.4	42.2	22.8	35.8
Developing a meaningful philosophy of life	74.6	70.5	49.5	68.2
Participating in a community action program	38.9	38.1	25.8	28.3
Keeping up to date with political affairs	40.0	26.7	20.4	32.9

[a]Proportion indicating life goal was essential or very important.

Table II-K

Career-Choice Reasons[a] of Whites Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Job openings generally available	38.2	51.2	59.5	62.4
Rapid career advancement possible	25.0	31.6	30.9	29.5
High anticipated earnings	33.2	49.0	33.3	35.6
Well-respected or prestigious occupation	38.7	39.5	35.3	27.9
Great deal of independence	51.3	53.2	28.0	29.8
Chance for steady progress	42.7	44.1	42.2	42.5
Can make an important contribution to society	78.8	51.5	75.6	59.7
Can avoid pressure	8.6	18.2	9.2	15.2
Can work with ideas	38.0	25.9	23.7	35.4
Can be helpful to others	85.9	68.4	93.0	79.9
Able to work with people	76.4	53.4	91.3	73.5
Intrinsic interest in the field	79.2	70.1	74.1	71.1

[a]Proportion indicating reason was very important in their career choice.

Table II-L

Career-Choice Reasons[a] of Blacks Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Job openings generally available	58.4	66.9	67.4	70.8
Rapid career advancement possible	40.0	46.4	48.1	52.4
High anticipated earnings	44.6	60.1	59.5	63.9
Well-respected or prestigious occupation	47.2	44.9	54.3	48.9
Great deal of independence	51.5	52.8	47.8	43.3
Chance for steady progress	62.4	61.2	67.0	65.7
Can make an important contribution to society	84.2	64.0	67.3	65.4
Can avoid pressure	12.9	21.1	21.4	23.0
Can work with ideas	48.8	39.8	39.6	46.5
Can be helpful to others	92.1	75.9	90.0	85.4
Able to work with people	87.7	64.3	89.1	82.5
Intrinsic interest in the field	77.4	72.1	73.0	70.7

[a]Proportion indicating reason was very important in their career choice.

Table II-M

Career-Choice Reasons[a] of American Indians Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Job openings generally available	47.9	51.7	71.6	59.7
Rapid career advancement possible	35.2	28.9	36.3	47.4
High anticipated earnings	46.9	57.5	35.6	46.7
Well-respected or prestigious occupation	35.1	44.2	48.7	41.2
Great deal of independence	54.4	84.1	44.1	44.1
Chance for steady progress	49.0	48.8	31.2	47.4
Can make an important contribution to society	82.1	70.9	78.0	56.1
Can avoid pressure	13.9	23.6	9.2	27.3
Can work with ideas	51.4	45.9	24.4	51.4
Can be helpful to others	87.0	77.6	95.5	81.8
Able to work with people	77.9	62.6	97.5	69.4
Intrinsic interest in the field	77.2	78.9	74.0	69.1

[a]Proportion indicating reason was very important in their career choice.

Table II-N

Career-Choice Reasons[a] of Asian-Americans Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Job openings generally available	48.9	59.9	44.1	57.9
Rapid career advancement possible	32.2	47.9	31.8	25.2
High anticipated earnings	37.1	63.1	35.8	40.6
Well-respected or prestigious occupation	48.2	50.5	50.3	27.5
Great deal of independence	53.4	49.3	24.0	30.4
Chance for steady progress	54.8	54.7	40.1	37.7
Can make an important contribution to society	80.5	51.6	55.2	56.2
Can avoid pressure	16.3	23.1	17.2	22.8
Can work with ideas	39.3	26.2	24.4	27.7
Can be helpful to others	86.7	68.5	79.0	79.6
Able to work with people	79.2	62.4	67.7	76.7
Intrinsic interest in the field	76.7	65.1	46.1	63.0

[a]Proportion indicating reason was very important in their career choice.

Table II-O

Career-Choice Reasons[a] of Hispanic-Americans Among 1974 Health-Career Aspirants, by Career Group

	Physicians	Other Medical Professionals	Nurses	Allied Health Professionals
Job openings generally available	42.6	58.8	62.1	64.1
Rapid career advancement possible	31.9	39.5	48.3	31.7
High anticipated earnings	38.8	54.7	42.8	38.5
Well-respected or prestigious occupation	44.2	51.9	49.2	40.3
Great deal of independence	49.5	59.8	29.4	25.3
Chance for steady progress	54.7	61.4	54.8	43.8
Can make an important contribution to society	78.3	71 3	67.3	50.0
Can avoid pressure	14.0	24.9	25.7	19.2
Can work with ideas	41.4	31.4	32.7	34.3
Can be helpful to others	87.9	86.8	91.7	84.9
Able to work with people	77.9	77.5	91.5	69.7
Intrinsic interest in the field	75.0	72.4	82.7	67.6

[a]Proportion indicating reason was very important in their career choice.

Chapter III

Summary and Conclusions

Recent years have seen a rise in the participation rates of minorities in health fields. That rise has been apparent at every level: from those actually practicing in various health fields, through those college graduates applying to and being accepted in health professional schools, to those freshmen aspiring to health careers. In 1966, about one in ten health-career aspirant belonged to a racial/ethnic minority group; by 1974, the proportion had risen to 13.2 percent. The increase in the absolute number of minority students interested in health careers was even more impressive: 105.8 percent, compared with a 55.5 percent increase in the number of white students expressing such an interest. The difference in growth rates was much greater for the medical professions (122.5 percent for minorities versus 33 percent for whites) than for the NAH professions (94 percent for minorities versus 83.1 percent for whites). There were differences by separate career choice as well. Thus, the increase in minority interest was largest for the field of nursing (200.7 percent), which also became more popular with white freshmen (a 109.5 percent increase over the eight-year period). For the allied health professions--health technology, therapy, and dietetics--the increase in the number of whites was larger than the increase in the number of minority students; indeed, the last of these three career groups registered a decline in the number of minority students. The number of minority students interested in becoming physicians increased by 136.3 percent, compared with a 14.2 percent increase for whites.

In addition, the growth rates of the various minority groups on whom data were available over the entire eight-year period differed. There were over one-and-one-half times more American Indians, twice as many blacks, and

almost twice as many Asian-Americans interested in health careers in 1974 than in 1966. Thus, by 1974, blacks and Asian-Americans were overrepresented among health-career aspirants, relative to their proportions in the entering freshman class; American Indians were about equally represented; and Hispanic-Americans were somewhat underrepresented.

Just how do these "new" types of students interested in health careers measure up to their white counterparts, in demographic and socioeconomic characteristics, abilities, interests, and values? The answer to this question is not simple since, as our study makes clear, minority health-career aspirants do not constitute a homogeneous group, and it is a grave mistake to treat them as such. Nor are the various health fields covered in this study homogeneous in their nature, rewards, and demands, ranging as they do from medicine (requiring four years of professional school and several more years of graduate training) through therapy (requiring at least a baccalaureate) to nursing (which may require no more than an associate degree). In many ways, differences among students aspiring to different health fields more closely followed socioeconomic and, in some cases, sex differences than racial/ethnic differences. Still, certain generalizations may be made about the different minority groups covered in this study.

Asian-Americans and, to a lesser extent, American Indians were more similar to the white majority than were Hispanic-Americans and blacks: They came from relatively affluent and well-educated backgrounds, they were highly achievement-oriented, and they had considerable confidence in their academic skills. Blacks and Hispanic-Americans, on the other hand, tended to come from disadvantaged backgrounds, both economically and educationally; consequently, they were more likely than others to express major concern over their

ability to pay for college, less likely to rely on "self-support" (parental aid, part-time or summer employment, savings) to finance college, more likely to rely on federal programs (Basic Educational Opportunity Grants, Supplemental Educational Opportunity Grants, College Work-Study), and somewhat more likely to borrow. In addition, they were less likely than others to give themselves high ratings on three basic skills that are closely related to success in college: academic ability, mathematical ability, and writing ability. On drive to achieve, however, blacks and American Indians ranked highest, followed by whites, Asian-Americans, and Hispanic-Americans.

In their life goals and reasons for career choice, health-career aspirants as a group differed from all freshmen in manifesting greater altruism and a stronger orientation toward people, though again there were marked differences among career groups. Interestingly, Hispanic-Americans and blacks (along with American Indians) were more likely to manifest these qualities than were Asian-Americans and whites. Moreover, they were more concerned with achievement in their field, whereas Asian-Americans were more interested in the material and status rewards of their profession. Blacks and Hispanic-Americans were somewhat more likely than others to report instrumental reasons--such as the availability of job openings, rapid advancement, steady progress, and the prestige of the occupation--for their career choice; blacks were also more likely than all others to cite high anticipated earnings. No doubt, this concern with the practical is partly attributable to their relatively low socioeconomic status: To students from disadvantaged backgrounds, health fields are particularly likely to represent respected, secure, and financially rewarding career options.

As one would expect from these differences, the various racial/ethnic

groups tended to be concentrated in different health fields. About two in five Asian-Americans among health-career aspirants, compared with one in five whites and from 24 to 28 percent of the other groups, planned to become physicians; about one in four Asian-Americans, whites, and Hispanic-Americans, but one in five American Indians and only one in eight blacks were interested in other medical professions. Nursing was particularly popular with blacks and American Indians, attracting about two in five of each group, compared with about 30 percent of Hispanic-Americans and whites but only 16.8 percent of Asian-Americans. Finally, one in four whites, one in five blacks, but 17 percent or fewer of the other groups named the allied health professions as their career choice.

Thus, though most blacks and Hispanic-Americans seemed to have the necessary interests, goals, and values, their relatively precarious financial position casts some doubt on their ability to realize their freshman career goals, and this is especially true for those who aim at careers requiring protracted and often expensive training. Moreover, their self-ratings of academic abilities would seem to place them at a disadvantage relative to whites, Asian-Americans, and American Indians. Some independent confirmation of these racial/ethnic differences in measured academic ability is offered by the comparative standings of the various groups on their Medical College Admission Test scores and their undergraduate grade-point averages: Of the 1974-75 medical school applicants, whites and Asian-Americans came out on top, American Indians scored ahead of Hispanic-Americans on MCAT scores though slightly below them on college grade-point average, and blacks were at the bottom on both (Johnson and Dubé, 1975, Table 18). Thus, blacks and Hispanic-Americans interested in medicine differed from others not only in

their lower self-ratings of academic skills (an assessment substantiated by their undergraduate grade-point averages and MCAT scores) but also in their lack of financial resources. One would expect, then, that these students would be more likely than others to drop out or to change their career plans in favor of less demanding occupations during the college years. Clearly, counselors can help those students opt for less demanding health fields rather than for nonhealth fields. Actually, among people employed in less demanding health fields, minorities are overrepresented. In 1970, blacks constituted about 12 percent of those employed in nursing, medical technology, and administration (about equal to their proportion in the U.S. population), and other minorities around 2 percent. Minorities were particularly likely to work in rather menial jobs in these fields, as nurses aides, orderlies, and attendants (Altenderfer, 1975). Thus, it may be that many minority students, when they enter college, have an unfavorable image of the allied health professions--an image that is erroneous as well, based on knowledge limited to jobs held by the noncollege-educated--and simply lack knowledge about the more attractive options in these fields. More complete career information--with special emphasis on the academic requirements of particular occupations--would seem to be required, both at the high school and the freshman level.

This study offers suggestive evidence that many freshmen, white as well as minority, have an imperfect understanding of what is involved when they check a particular career option. For instance, disturbingly large proportions of the women--nonblack and black--aspiring to dentistry and optometry had degree aspirations and major field plans that were inconsistent with their stated career goals, raising the suspicion that many of them had in mind the position of assistant or technician. The regrettable conclu-

sion is that, despite the emphasis in recent years on guidance and counseling, these services apparently are not doing an adequate job of informing students about health careers.

The sixties saw a rise in minority expectations, given impetus by explicit official commitment to equal educational opportunity for all, regardless of race/ethnicity or socioeconomic background. Massive student aid programs were initiated, directed primarily at those young people who previously might never have considered going to college at all, let alone aiming at high-level professions. Academic institutions at all levels--with some of the most prestigious in the vanguard--engaged in vigorous recruitment programs to attract low-income minority students, especially blacks, into their gates. Some institutions were foresighted enough to provide, at the same time, ample supportive services--academic counseling, tutoring, financial aid--to make up for the educational deficiencies often suffered by these students and to mitigate the psychological stress that many felt as they found themselves isolated in a competitive and alien world. In many cases, however, no such services were provided. Nonetheless, low-income students of all races were suddenly confronted with what seemed to be a rich opportunity to improve their lot and move into prestigious, well-paying occupations. Their response to this apparent opportunity was reflected in the heavy increases in the number of minorities entering college and in their high degree and career aspirations.

Under pressure of economic crisis, the optimism, idealism, and generosity of the sixties has given way to conservatism, even cynicism, about how much this society can or should promise to all its citizens. Just at a time when higher education had apparently become more accessible to many of the young

people previously excluded, the value, economic and otherwise, of a college education is being questioned. As college costs continue to mount, and as the job market for college graduates tightens, parents have come to doubt the wisdom of investing scarce family resources in so uncertain a credential as a baccalaureate degree.

Financial exigencies have forced some institutions to cut back on those student services and programs designed to meet directly the needs of disadvantaged students. At the federal level, the aid programs initiated in the sixties have never been fully funded, and individual grants have sometimes fallen far short of the individual student's needs, particularly if that student attends a private institution and continues beyond college into professional school. Many disadvantaged students, unable to make ends meet through grants, must borrow heavily and may accumulate heavy debts; the impact of insecure financial status on career choice and on scholastic concentration has yet to be estimated.

After a few bright years when the gates of higher learning seemed to be opening to all young people, the prospects look much dimmer now; in a few years, the medical professions may once again become the exclusive domain of whites from affluent backgrounds. As needs reiteration, the problem is not primarily one of racial/ethnic background but one of socioeconomic level: The minority group closest to the white majority with respect to income level (that is, Asian-Americans) are not now, and have not been, underrepresented in the medical professions. But blacks and Hispanic-Americans, who tend to come from lower-income levels, are now finding that their opportunities to enter prestigious and high-level occupations--occupations that would put them in the mainstream of American society and would

at the same time allow them to gratify their desire to contribute to that society--are narrowing. The nation's chance to achieve a mix of health professionals to meet the demands of society for a better and more flexible system of health-care delivery is ill-served by the narrowing of these opportunities for significant segments of the population.

References

Altenderfer, Marion. Minorities and Women in the Health Fields: Applicants, Students, and Workers. Manpower References, DHEW Publication No. (HRA) 76-22, Washington: U.S. Government Printing Office, 1975.

Astin, Alexander W.; King, Margo R.; Light, John M.; and Richardson, Gerald T. The American Freshman: National Norms for Fall 1974. Los Angeles: University of California at Los Angeles and the American Council on Education, 1974.

Holmstrom, Engin Inel; Knepper, Paula R.; and Kent, Laura. Women and Minorities in Health Fields: A Trend Analysis of College Freshmen--Volume I: Freshmen Interested in the Health Professions. Washington: Policy Analysis Service, American Council on Education, 1976a.

Holmstrom, Engin Inel; Knepper, Paula R.; and Kent, Laura. Women and Minorities in Health Fields: A Trend Analysis of College Freshmen--Volume II: Freshmen Interested in Nursing and Allied Health Professions. Washington: Policy Analysis Service, American Council on Education, 1976b.

Johnson, Davis G., and Dubé, W.F. Descriptive Study of Medical School Aspirants, 1974-75. Health Manpower References, DHEW Publication No. (HRA) 76-95. Washington: U.S. Government Printing Office, 1975.

U.S. Bureau of the Census. Census of Population: 1970, "Final Report PC(2)-1G, Japanese, Chinese, and Filipinos in the United States." Washington: U.S. Government Printing Office, 1973.

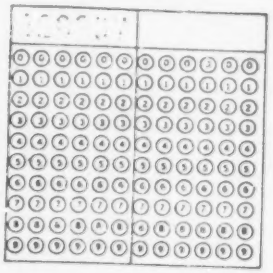
U.S. Bureau of the Census. Census of Population, 1970, "Final Report PC(2)-5A, School Enrollment." Washington: U.S. Government Printing Office, 1973.

U.S. Bureau of the Census. Census of Population: 1970, "Volume I: Characteristics of the Population, Part 1: United States Summary--Section 1." Washington: U.S. Government Printing Office, 1973.

U.S. Bureau of the Census. Current Population Reports, Series P-60, No. 101, "Money Income in 1974 of Families and Persons in the United States." Washington: U.S. Government Printing Office, 1976.

APPENDIX A: STUDENT INFORMATION FORM, 1966

STUDENT INFORMATION FORM



YOUR NAME(please print) _____
First Middle or Maiden Last

HOME STREET ADDRESS _____

CITY STATE ZIP CODE (if known)

Note: The information in this report is being collected through the American Council on Education as part of a study of this year's entering class. Please complete all items. Your name and address has been requested in order to facilitate mail follow-up studies. Your responses will be used only in group summaries for research purposes, and will not be identified with you individually.

Social Security Number (if known)

Date of Birth ____ ____ ____
Month Day Year

If you recently took any of the national achievement tests and happen to remember your score, fill in the appropriate information:

SAT Verbal Score

SAT Math

ACT Composite Score

NMSC Selection Score

DIRECTIONS: Your responses will be read by an automatic scanning device. Your careful observance of these few simple rules will be most appreciated.

Use only black lead pencil (No. 2½ or softer).
Make heavy black marks that fill the circle.
Erase cleanly any answer you wish to change.
Make no stray markings of any kind.

Example: Will marks made with ball pen or fountain pen be properly read? Yes ○ No ●

1. Your Sex: Male ○ Female ○

2. From what kind of secondary school did you graduate? (Mark one)
- Public ○
- Private (denominational) ○
- Private (nondenominational) ○
- Other ○

3. What was your average grade in secondary school? (Mark one)
- A or A+ ○
- A- ○
- B+ ○
- B ○
- B- ○
- C+ ○
- C ○
- D ○

4. What is the highest academic degree that you intend to obtain? (Mark one)
- None ○
- Associate (or equivalent) ○
- Bachelor's degree (B.A., B.S., etc.) ○
- Master's degree (M.A., M.S., etc.) ○
- Ph.D. or Ed.D. ○
- M.D., D.D.S., or D.V.M. ○
- LL.B. or J.D. ○
- B.D. ○
- Other ○

5. The following questions deal with accomplishments that might possibly apply to your high school years. Do not be discouraged by this list: it covers many areas of interest and few students will be able to say "yes" to many items. (Mark all that apply)
- Was elected president of one or more student organizations (recognized by the school) ○
- Received a high rating (Good, Excellent) in a state or regional music contest ○
- Participated in a state or regional speech or debate contest ○
- Had a major part in a play ○
- Won a varsity letter (sports) ○
- Won a prize or award in an art competition ○
- Edited the school paper, yearbook, or literary magazine ○
- Had poems, stories, essays, or articles published ○
- Participated in a National Science Foundation summer program ○
- Placed (first, second, or third) in a state or regional science contest ○
- Was a member of a scholastic honor society ○
- Won a Certificate of Merit or Letter of Commendation in the National Merit Program ○

6. Do you have any concern about your ability to finance your college education? (Mark one)

- None (I am confident that I will have sufficient funds) ○
- Some concern (but I will probably have enough funds) ○
- Major concern (not sure I will be able to complete college) ○

7. Through what source do you intend to finance the first year of your undergraduate education? (Mark one for each item)

	Major Source	Minor Source	Not a Source
Employment during college	○	○	○
Employment during summer	○	○	○
Scholarship	○	○	○
G. I. Bill	○	○	○
Personal savings	○	○	○
Tuition deferment loan from college	○	○	○
Parental aid	○	○	○
Federal government	○	○	○
Commercial loan	○	○	○

8. What is your racial background? (Mark one)

- Caucasian ○
- Negro ○
- American Indian ○
- Oriental ○
- Other ○

9. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less	○	○
Some high school	○	○
High school graduate	○	○
Some college	○	○
College degree	○	○
Postgraduate degree	○	○

10. What is your best estimate of the total income last year of your parental family (not your own family if you are married)? Consider annual income from all sources before taxes.

- Less than $4,000 ○
- $4,000–$5,999 ○
- $6,000–$7,999 ○
- $8,000–$9,999 ○
- $10,000–$14,999 ○
- $15,000–$19,999 ○
- $20,000–$24,999 ○
- $25,000–$29,999 ○
- $30,000 or more ○

11. Mark one in each column below:

	Religion in Which You Were Reared	Your Present Religious Preference
Protestant	○	○
Roman Catholic	○	○
Jewish	○	○
Other	○	○
None	○	○

12. In deciding where to go to college, through what source did this college first come to your attention? (Mark one)

- Relative ○
- Friend ○
- High school counselor or teacher ○
- Professional counseling or college placement service ○
- This college or a representative from this college ○
- Other source ○
- I cannot recall ○

13. To what extent do you think each of the following describes the psychological climate or atmosphere at this college? (Mark one answer for each item)

	Very Descriptive	In Between	Not at all Descriptive
Intellectual	○	○	○
Snobbish	○	○	○
Social	○	○	○
Victorian	○	○	○
Practical-minded	○	○	○
Warm	○	○	○
Realistic	○	○	○
Liberal	○	○	○

14. Answer each of the following as you think it applies to this college:

	Yes	No
The students are under a great deal of pressure to get high grades	○	○
The student body is apathetic and has little "school spirit"	○	○
Most of the students are of a very high calibre academically	○	○
There is a keen competition among most of the students for high grades	○	○
Freshmen have to take orders from upperclassmen for a period of time	○	○
There isn't much to do except to go to class and study	○	○
I felt "lost" when I first came to the campus	○	○
Being in this college builds poise and maturity	○	○
Athletics are overemphasized	○	○
The classes are usually run in a very informal manner	○	○
Most students are more like "numbers in a book"	○	○

15. Are you:

- An only child (Mark and skip to number 20) ○
- The first-born (but not an only child) ○
- The second-born ○
- The third-born ○
- Fourth (or later) born ○

16. How many brothers and sisters now living do you have? (Mark one)

- None (Mark and skip to number 20) ○

1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 or more ○

17. Mark one circle for each of your brothers and sisters between the ages of 13 and 23

	13	14	15	16	17	18	19	20	21	22	23
Brothers	○	○	○	○	○	○	○	○	○	○	○
Sisters	○	○	○	○	○	○	○	○	○	○	○

18. Are you a twin? (Mark one)

- No. (Mark and skip to number 20) ○
- Yes, identical ○
- Yes, fraternal same sex ○
- Yes, fraternal opposite sex ○

19. Is your twin attending college?

- No ○
- Yes, the same college ○
- Yes, a different college ○

20. Mark one in each column:

	Your current home state	Your birthplace	Your father's birthplace	Your mother's birthplace
Alabama	○	○	○	○
Alaska	○	○	○	○
Arizona	○	○	○	○
Arkansas	○	○	○	○
California	○	○	○	○
Colorado	○	○	○	○
Connecticut	○	○	○	○
Delaware	○	○	○	○
D. C.	○	○	○	○
Florida	○	○	○	○
Georgia	○	○	○	○
Hawaii	○	○	○	○
Idaho	○	○	○	○
Illinois	○	○	○	○
Indiana	○	○	○	○
Iowa	○	○	○	○
Kansas	○	○	○	○
Kentucky	○	○	○	○
Louisiana	○	○	○	○
Maine	○	○	○	○
Maryland	○	○	○	○
Massachusetts	○	○	○	○
Michigan	○	○	○	○
Minnesota	○	○	○	○
Mississippi	○	○	○	○
Missouri	○	○	○	○
Montana	○	○	○	○
Nebraska	○	○	○	○
Nevada	○	○	○	○
New Hampshire	○	○	○	○
New Jersey	○	○	○	○
New Mexico	○	○	○	○
New York	○	○	○	○
North Carolina	○	○	○	○
North Dakota	○	○	○	○
Ohio	○	○	○	○
Oklahoma	○	○	○	○
Oregon	○	○	○	○
Pennsylvania	○	○	○	○
Rhode Island	○	○	○	○
South Carolina	○	○	○	○
South Dakota	○	○	○	○
Tennessee	○	○	○	○
Texas	○	○	○	○
Utah	○	○	○	○
Vermont	○	○	○	○
Virginia	○	○	○	○
Washington	○	○	○	○
West Virginia	○	○	○	○
Wisconsin	○	○	○	○
Wyoming	○	○	○	○
Latin America	○	○	○	○
Europe	○	○	○	○
Africa	○	○	○	○
Asia	○	○	○	○
Other	○	○	○	○

21. Below is a list of 66 different undergraduate major fields grouped into general categories. Mark only three of the 66 fields as follows:

① First choice (your probable major field of study).
② Second choice.
Ⓛ The field of study which is least appealing to you.

Arts and Humanities

Architecture	①	②	Ⓛ
English (literature)	①	②	Ⓛ
Fine arts	①	②	Ⓛ
History	①	②	Ⓛ
Journalism (writing)	①	②	Ⓛ
Language (modern)	①	②	Ⓛ
Language (other)	①	②	Ⓛ
Music	①	②	Ⓛ
Philosophy	①	②	Ⓛ
Speech and drama	①	②	Ⓛ
Theology	①	②	Ⓛ
Other	①	②	Ⓛ

Biological Science

Biology (general)	①	②	Ⓛ
Biochemistry	①	②	Ⓛ
Biophysics	①	②	Ⓛ
Botany	①	②	Ⓛ
Zoology	①	②	Ⓛ
Other	①	②	Ⓛ

Business

Accounting	①	②	Ⓛ
Business admin.	①	②	Ⓛ
Electronic data processing	①	②	Ⓛ
Secretarial studies	①	②	Ⓛ
Other	①	②	Ⓛ

Engineering

Aeronautical	①	②	Ⓛ
Civil	①	②	Ⓛ
Chemical	①	②	Ⓛ
Electrical	①	②	Ⓛ
Industrial	①	②	Ⓛ
Mechanical	①	②	Ⓛ
Other	①	②	Ⓛ

Physical Science

Chemistry	①	②	Ⓛ
Earth science	①	②	Ⓛ
Mathematics	①	②	Ⓛ
Physics	①	②	Ⓛ
Statistics	①	②	Ⓛ
Other	①	②	Ⓛ

Professional

Health Technology (medical, dental, laboratory)	①	②	Ⓛ
Nursing	①	②	Ⓛ
Pharmacy	①	②	Ⓛ
Predentistry	①	②	Ⓛ
Prelaw	①	②	Ⓛ
Premedical	①	②	Ⓛ
Preveterinary	①	②	Ⓛ
Therapy (occupat., physical, speech)	①	②	Ⓛ
Other	①	②	Ⓛ

Social Science

Anthropology	①	②	Ⓛ
Economics	①	②	Ⓛ
Education	①	②	Ⓛ
History	①	②	Ⓛ
Political science (government, int. relations)	①	②	Ⓛ
Psychology	①	②	Ⓛ
Social work	①	②	Ⓛ
Sociology	①	②	Ⓛ
Other	①	②	Ⓛ

Other Fields

Agriculture	①	②	Ⓛ
Communications (radio, T. V., etc.)	①	②	Ⓛ
Electronics (technology)	①	②	Ⓛ
Forestry	①	②	Ⓛ
Home economics	①	②	Ⓛ
Industrial arts	①	②	Ⓛ
Library science	①	②	Ⓛ
Military science	①	②	Ⓛ
Physical education and recreation	①	②	Ⓛ
Other (nontechnical)	①	②	Ⓛ
Other (nontechnical)	①	②	Ⓛ
Undecided	①	②	Ⓛ

Please be sure that only three circles have been marked in the above list.

22. Probable Career Occupation

Note: Make only three responses, one in each column — ① First Choice, ② Second Choice, Ⓛ [illegible] Appealing

Accountant or actuary	①	②	Ⓛ
Actor or entertainer	①	②	Ⓛ
Architect	①	②	Ⓛ
Artist	①	②	Ⓛ
Business (clerical)	①	②	Ⓛ
Business executive (management, administrator)	①	②	Ⓛ
Business owner or proprietor	①	②	Ⓛ
Business salesman or buyer	①	②	Ⓛ
Clergyman (minister, priest)	①	②	Ⓛ
Clergy (other religious)	①	②	Ⓛ
Clinical psychologist	①	②	Ⓛ
College teacher	①	②	Ⓛ
Computer programmer	①	②	Ⓛ
Conservationist or forester	①	②	Ⓛ
Dentist (including orthodontist)	①	②	Ⓛ
Dietitian or home economist	①	②	Ⓛ
Engineer	①	②	Ⓛ
Farmer or rancher	①	②	Ⓛ
Foreign service worker (including diplomat)	①	②	Ⓛ
Housewife	①	②	Ⓛ
Interior decorator (including designer)	①	②	Ⓛ
Interpreter (translater)	①	②	Ⓛ
Lab technician or hygienist	①	②	Ⓛ
Law enforcement officer	①	②	Ⓛ
Lawyer (attorney)	①	②	Ⓛ
Military service (career)	①	②	Ⓛ
Musician (performer, composer)	①	②	Ⓛ
Nurse	①	②	Ⓛ
Optometrist	①	②	Ⓛ
Pharmacist	①	②	Ⓛ
Physician	①	②	Ⓛ
School counselor	①	②	Ⓛ
School principal or superintendent	①	②	Ⓛ
Scientific researcher	①	②	Ⓛ
Social worker	①	②	Ⓛ
Statistician	①	②	Ⓛ
Therapist (physical, occupational, speech)	①	②	Ⓛ
Teacher (elementary)	①	②	Ⓛ
Teacher (secondary)	①	②	Ⓛ
Veterinarian	①	②	Ⓛ
Writer or journalist	①	②	Ⓛ
Skilled trades	①	②	Ⓛ
Other	①	②	Ⓛ
Undecided	①	②	Ⓛ

23 Below is a general list of things that students sometimes do. Indicate which of these things you did during the past year in school. If you engaged in an activity frequently, Mark "f." If you engaged in an activity one or more times, but not frequently, Mark "o" (occasionally). Mark "n" (not at all) if you have not performed the activity during the past year. (Mark one for each item)

	Frequently	Occasionally	Not at all
Voted in a student election	F	O	N
Came late to class	F	O	N
Listened to New Orlean's (Dixieland) jazz	F	O	N
Gambled with cards or dice	F	O	N
Played a musical instrument	F	O	N
Took a nap or rest during the day	F	O	N
Drove a car	F	O	N
Stayed up all night	F	O	N
Studied in the library	F	O	N
Attended a ballet performance	F	O	N
Participated on the speech or debate team	F	O	N
Acted in plays	F	O	N
Sang in a choir or glee club	F	O	N
Argued with other students	F	O	N
Called a teacher by his or her first name	F	O	N
Wrote an article for the school paper or literary magazine	F	O	N
Had a blind date	F	O	N
Wrote a short story or poem (not for a class)	F	O	N
Played in a school band	F	O	N
Played in a school orchestra	F	O	N
Smoked cigarettes	F	O	N
Attended Sunday school	F	O	N
Checked out a book or journal from the school library	F	O	N
Went to the movies	F	O	N
Discussed how to make money with other students	F	O	N
Said grace before meals	F	O	N
Prayed (not including grace before meals)	F	O	N
Listened to folk music	F	O	N
Attended a public recital or concert	F	O	N
Made wisecracks in class	F	O	N
Arranged a date for another student	F	O	N
Went to an overnight or week-end party	F	O	N
Took weight reducing or dietary formula	F	O	N
Drank beer	F	O	N
Overslept and missed a class or appointment	F	O	N
Typed a homework assignment	F	O	N
Participated in an informal group sing	F	O	N
Drank wine	F	O	N
Cribbed on an examination	F	O	N
Turned in a paper or theme late	F	O	N
Tried on clothes in a store without buying anything	F	O	N
Asked questions in class	F	O	N
Attended church	F	O	N
Participated in organized demonstrations	F	O	N

24 Indicate the importance to you personally of each of the following. (Mark one for each item)

	Essential	Very important	Somewhat important	Not important
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	E	V	S	N
Becoming an authority on a special subject in my subject field	E	V	S	N
Obtaining recognition from my colleagues for contributions in my special field	E	V	S	N
Becoming an accomplished musician (performer or composer)	E	V	S	N
Becoming an expert in finance and commerce	E	V	S	N
Having administrative responsibility for the work of others	E	V	S	N
Being very well-off financially	E	V	S	N
Helping others who are in difficulty	E	V	S	N
Participating in an organization like the Peace Corps or Vista	E	V	S	N
Becoming an outstanding athlete	E	V	S	N
Becoming a community leader	E	V	S	N
Making a theoretical contribution to science	E	V	S	N
Writing original works (poems, novels, short stories, etc.)	E	V	S	N
Never being obligated to people	E	V	S	N
Creative artistic work (painting, sculpture, decorating, etc.)	E	V	S	N
Keeping up to date with political affairs	E	V	S	N
Being successful in a business of my own	E	V	S	N

25 Rate yourself on each of the following traits as you really think you are when compared with the average student of your own age. We want the most accurate estimate of how you see yourself. (Mark one for each item)

Trait	Highest 10 Percent	Above Average	Average	Below Average	Lowest 10 Percent
Academic ability	O	O	O	O	O
Athletic ability	O	O	O	O	O
Artistic ability	O	O	O	O	O
Cheerfulness	O	O	O	O	O
Defensiveness	O	O	O	O	O
Drive to achieve	O	O	O	O	O
Leadership ability	O	O	O	O	O
Mathematical ability	O	O	O	O	O
Mechanical ability	O	O	O	O	O
Originality	O	O	O	O	O
Political conservatism	O	O	O	O	O
Political liberalism	O	O	O	O	O
Popularity	O	O	O	O	O
Popularity with the opposite sex	O	O	O	O	O
Public speaking ability	O	O	O	O	O
Self-confidence (intellectual)	O	O	O	O	O
Self-confidence (social)	O	O	O	O	O
Sensitivity to criticism	O	O	O	O	O
Stubbornness	O	O	O	O	O
Understanding of others	O	O	O	O	O
Writing ability	O	O	O	O	O

26 How old will you be on December 31 of this year? (Mark one)

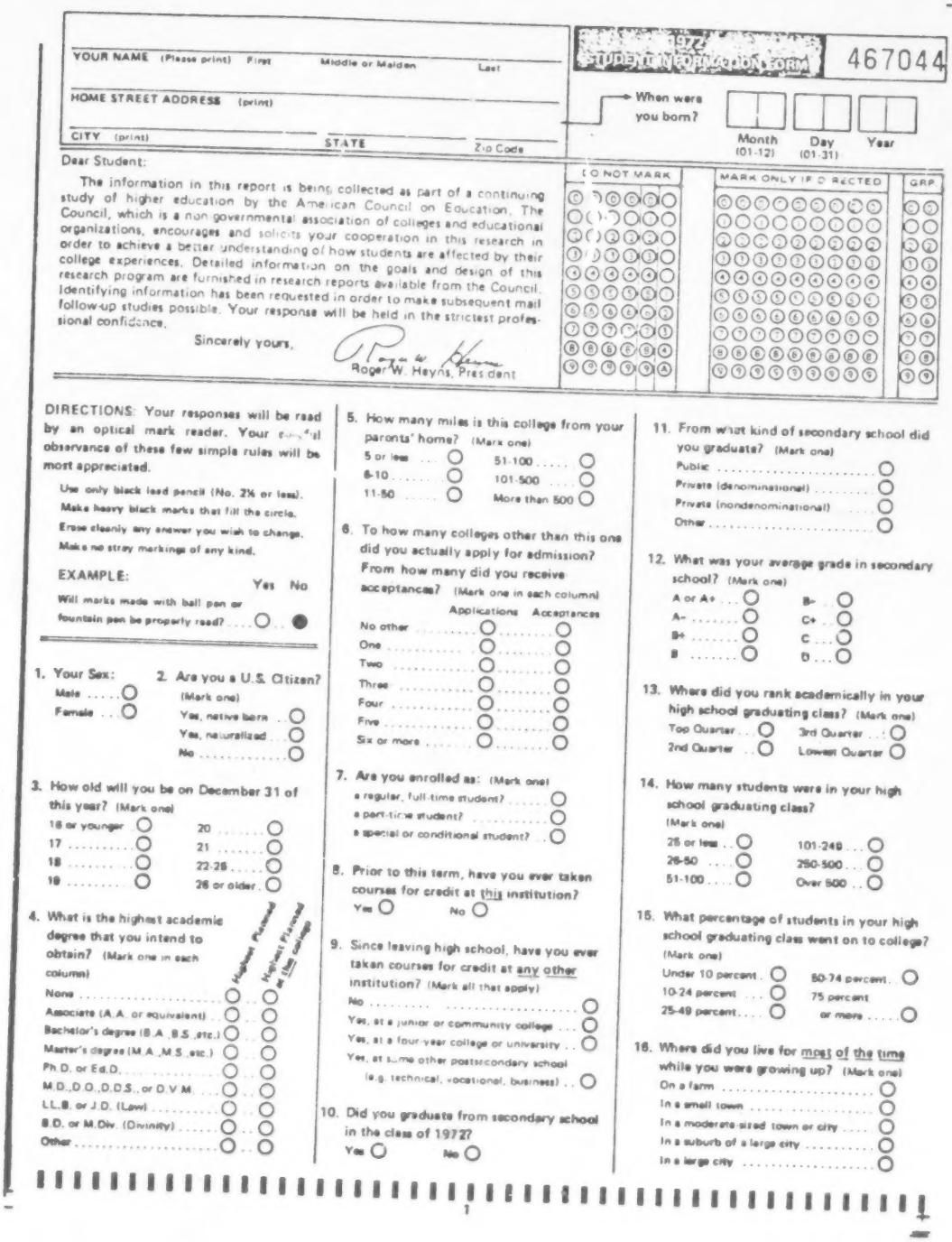
- 16 or younger
- 17
- 18
- 19
- 20
- 21
- Older than 21

27 If you are married, omit the following question)
What is your best guess as to the chances that you will marry

	While in College?	Within a Year after College?
Very good chance	O	O
Some chance	O	O
Very little chance	O	O
No chance	O	O

Prepared by American Council on Education 1785 Massachusetts Ave., N.W. Washington, D.C.

APPENDIX B: STUDENT INFORMATION FORM, 1972



YOUR NAME (Please print) First Middle or Maiden Last

HOME STREET ADDRESS (print)

CITY (print) STATE Zip Code

1972 STUDENT INFORMATION FORM 467044

When were you born? Month (01-12) Day (01-31) Year

Dear Student:

The information in this report is being collected as part of a continuing study of higher education by the American Council on Education. The Council, which is a non governmental association of colleges and educational organizations, encourages and solicits your cooperation in this research in order to achieve a better understanding of how students are affected by their college experiences. Detailed information on the goals and design of this research program are furnished in research reports available from the Council. Identifying information has been requested in order to make subsequent mail follow-up studies possible. Your response will be held in the strictest professional confidence.

Sincerely yours,

Roger W. Heyns, President

DO NOT MARK | MARK ONLY IF CORRECTED | GRP.

DIRECTIONS: Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.

Use only black lead pencil (No. 2½ or less).
Make heavy black marks that fill the circle.
Erase cleanly any answer you wish to change.
Make no stray markings of any kind.

EXAMPLE: Yes No

Will marks made with ball pen or fountain pen be properly read? ... ○ ... ●

1. Your Sex:
   Male ... ○
   Female ... ○

2. Are you a U.S. Citizen? (Mark one)
   Yes, native born ... ○
   Yes, naturalized ... ○
   No ... ○

3. How old will you be on December 31 of this year? (Mark one)
   18 or younger ○ 20 ○
   17 ○ 21 ○
   18 ○ 22-25 ○
   19 ○ 26 or older ○

4. What is the highest academic degree that you intend to obtain? (Mark one in each column)

	Highest Planned	Highest Planned at This college
None	○	○
Associate (A.A. or equivalent)	○	○
Bachelor's degree (B.A., B.S., etc.)	○	○
Master's degree (M.A., M.S., etc.)	○	○
Ph.D. or Ed.D.	○	○
M.D., D.O., D.D.S., or D.V.M.	○	○
LL.B. or J.D. (Law)	○	○
B.D. or M.Div. (Divinity)	○	○
Other	○	○

5. How many miles is this college from your parents' home? (Mark one)
   5 or less ○ 51-100 ○
   6-10 ○ 101-500 ○
   11-50 ○ More than 500 ○

6. To how many colleges other than this one did you actually apply for admission? From how many did you receive acceptances? (Mark one in each column)

	Applications	Acceptances
No other	○	○
One	○	○
Two	○	○
Three	○	○
Four	○	○
Five	○	○
Six or more	○	○

7. Are you enrolled as: (Mark one)
   a regular, full-time student? ... ○
   a part-time student? ... ○
   a special or conditional student? ... ○

8. Prior to this term, have you ever taken courses for credit at this institution?
   Yes ○ No ○

9. Since leaving high school, have you ever taken courses for credit at any other institution? (Mark all that apply)
   No ... ○
   Yes, at a junior or community college ... ○
   Yes, at a four-year college or university ... ○
   Yes, at some other postsecondary school (e.g. technical, vocational, business) ... ○

10. Did you graduate from secondary school in the class of 1972?
    Yes ○ No ○

11. From what kind of secondary school did you graduate? (Mark one)
    Public ... ○
    Private (denominational) ... ○
    Private (nondenominational) ... ○
    Other ... ○

12. What was your average grade in secondary school? (Mark one)
    A or A+ ... ○ B- ... ○
    A- ... ○ C+ ... ○
    B+ ... ○ C ... ○
    B ... ○ D ... ○

13. Where did you rank academically in your high school graduating class? (Mark one)
    Top Quarter ... ○ 3rd Quarter ... ○
    2nd Quarter ... ○ Lowest Quarter ○

14. How many students were in your high school graduating class? (Mark one)
    25 or less ... ○ 101-249 ... ○
    26-50 ... ○ 250-500 ... ○
    51-100 ... ○ Over 500 ... ○

15. What percentage of students in your high school graduating class went on to college? (Mark one)
    Under 10 percent ... ○ 50-74 percent ... ○
    10-24 percent ... ○ 75 percent or more ... ○
    25-49 percent ... ○

16. Where did you live for most of the time while you were growing up? (Mark one)
    On a farm ... ○
    In a small town ... ○
    In a moderate-sized town or city ... ○
    In a suburb of a large city ... ○
    In a large city ... ○

1

17. Which applies to you? (Mark one)

- Presently married
- Presently engaged
- Have been seeing one person exclusively
- Have been dating, but no one steadily
- Have not been dating in recent months

18. Do you have any concern about your ability to finance your college education? (Mark one)

- None (I am confident that I will have sufficient funds)
- Some concern (but I will probably have enough funds)
- Major concern (not sure I will have enough funds to complete college)

19. For each item below, indicate its importance as a source for financing your education. (Mark one answer for each item)

	Major Source	Minor Source	Not a Source
Part-time or summer work			
Savings from full-time employment			
Spouse's employment			
Parental or family aid or gifts			
Federal benefits from parent's military service			
G.I. benefits from your military service			
Scholarships and grants			
NDEA loans, federally insured loans, or college loans			
Other repayable loans			

20. What is your best estimate of the total income last year of your parents (not your own family, if you are married)? **Consider annual income from all sources before taxes.** (Mark one)

Less than $3,000	$15,000-$19,999
$3,000-$3,999	$20,000-$24,999
$4,000-$5,999	$25,000-$29,999
$6,000-$7,999	$30,000-$34,999
$8,000-$9,999	$35,000-$39,999
$10,000-$12,499	$40,000-$49,999
$12,500-$14,999	$50,000 or more

21. What is the highest level of formal education obtained by your parents and (if married) by your spouse? (Mark one in each column)

	Father	Mother	Spouse
Grammar school or less			
Some high school			
High school graduate			
Some college			
College degree			
Some graduate school			
Graduate degree			
(Not married)			

22. Mark one in each row:

	Jewish	Protestant	Roman Catholic	Other	None
Religion in which mother was reared					
Religion in which father was reared					
Religion in which you were reared					
Your present religious preference					

23. Which of the following is currently true about your parents? (Mark one)

- Both alive and married to each other
- Both alive and divorced or separated
- One or both parents deceased

24. Are your parents employed at present? (Mark one in each column)

	Father	Mother
Yes, full-time		
Yes, part-time		
No, but was in the past		
No, and never was		

25. How would you characterize your political views? (Mark one)

- Far left
- Liberal
- Middle-of-the-road
- Conservative
- Far right

26. Below is a list of statements on a wide range of topics that may or may not apply to you. Mark all items to which you are able to answer "yes".

	Yes
I have been employed for at least a year while not in school	
I have won a prize or award in an art competition	
I have had poems, stories, essays, or articles published	
During the past year I:	
played a musical instrument	
attended religious services	
participated in an organized demonstration	
visited an art gallery or museum	
smoked cigarettes regularly	
drank beer	
had vocational counseling	
worked in a local, state, or national political campaign	
While in high school I:	
was a member of a scholastic honor society	
won a varsity letter in basketball or football	
won a varsity letter in another sport	
edited the high school paper, yearbook, or literary magazine	

27. What is: (Mark one in each column)

- Your probable future occupation?
- Your father's current occupation?
- Your mother's current occupation?
- Your spouse's current occupation, if married?

NOTE: If your father or mother is deceased or retired, please indicate his or her last occupation.

	Y	F	M	S
Accountant or actuary				
Actor or entertainer				
Architect				
Artist				
Business (clerical)				
Business executive (manager, administrator)				
Business owner or proprietor				
Business salesman or buyer				
Clergy (rabbi, minister, priest)				
Clergy (other religious)				
Clinical psychologist				
College teacher				
Computer programmer				
Conservationist or forester				
Dentist (including orthodontist)				
Dietitian or home economist				
Engineer				
Farmer or rancher				
Foreign service worker (including diplomat)				
Homemaker (full-time)				
Interior decorator (including designer)				
Interpreter (translator)				
Lab technician or hygienist				
Law enforcement officer				
Lawyer (attorney)				
Military service (career)				
Musician (performer, composer)				
Nurse				
Optometrist				
Pharmacist				
Physician				
School counselor				
School principal / superintendent				
Scientific researcher				
Social worker				
Statistician				
Therapist (physical, occupational, speech)				
Teacher (elementary)				
Teacher (secondary)				
Veterinarian				
Writer or journalist				
Skilled trades				
Other				
Undecided				
Laborer (unskilled)				
Semi-skilled worker				
Other occupation				
Unemployed				
Student				

28. Are you a veteran? (Mark one)

- No
- Yes, I served in Southeast Asia
- Yes, but I did not serve in Southeast Asia

29. Are you: (Mark all that apply.)

- White/Caucasian
- Black/Negro/Afro-American
- American Indian
- Oriental
- Mexican-American/Chicano
- Puerto Rican-American
- Other

30. The following is a list of several ethnic groups. The list is not intended to be all inclusive; if no response seems appropriate, mark "none of above apply."

(Mark one in each column)	Father's Ethnic Group	Mother's Ethnic Group	Your Ethnic Identity (if any)
Canadian	O	O	O
English/Scotch/Welsh	O	O	O
Greek	O	O	O
Italian	O	O	O
Irish	O	O	O
Latin American/Spanish	O	O	O
Polish	O	O	O
Russian or other Slavic	O	O	O
Scandinavian	O	O	O
None of above apply	O	O	O

31. Mark one in each row: Agree strongly / Agree somewhat / Disagree somewhat / Disagree strongly

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly
The Federal government is not doing enough to control environmental pollution	O	O	O	O
The Federal government is not doing enough to protect the consumer from faulty goods and services	O	O	O	O
The Federal government is not doing enough to promote school desegregation	O	O	O	O
There is too much concern in the courts for the rights of criminals	O	O	O	O
As long as they work hard, people should be paid equally regardless of ability or quality of work	O	O	O	O
The activities of married women are best confined to the home and family	O	O	O	O
Wealthy people should pay a larger share of taxes than they do now	O	O	O	O
Marijuana should be legalized	O	O	O	O
Parents should be discouraged from having large families	O	O	O	O
Women should receive the same salary and opportunities for advancement as men in comparable positions	O	O	O	O
Realistically, an individual can do little to bring about changes in our society	O	O	O	O

32. Mark one in each row: Agree strongly / Agree somewhat / Disagree somewhat / Disagree strongly

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly
College officials have the right to regulate student behavior off campus	O	O	O	O
The chief benefit of a college education is that it increases one's earning power	O	O	O	O
Faculty promotions should be based in part on student evaluations	O	O	O	O
College grades should be abolished	O	O	O	O
Colleges would be improved if organized sports were de-emphasized	O	O	O	O
Student publications should be cleared by college officials	O	O	O	O
College officials have the right to ban persons with extreme views from speaking on campus	O	O	O	O
Students from disadvantaged social backgrounds should be given preferential treatment in college admissions	O	O	O	O
Most college officials have been too lax in dealing with student protests on campus	O	O	O	O
Open admissions (admitting anyone who applies) should be adopted by all publicly supported colleges	O	O	O	O
Even if it employs open admissions, a college should use the same performance standards in awarding degrees to all students	O	O	O	O

33. What is your best guess as to the chances that you will: (Mark one for each item)

	Very Good Chance	Some Chance	Very Little Chance	No Chance
Change major field?	O	O	O	O
Change career choice?	O	O	O	O
Fail one or more courses?	O	O	O	O
Graduate with honors?	O	O	O	O
Be elected to a student office?	O	O	O	O
Join a social fraternity, sorority, or club?	O	O	O	O
Be elected to an academic honor society?	O	O	O	O
Make at least a "B" average?	O	O	O	O
Need extra time to complete your degree requirements?	O	O	O	O
Have to work at an outside job during college?	O	O	O	O
Seek vocational counseling?	O	O	O	O
Seek individual counseling on personal problems?	O	O	O	O
Enroll in honors courses?	O	O	O	O
Get a bachelor's degree (B.A., B.S., etc.)?	O	O	O	O
Drop out of this college temporarily (exclude transferring)?	O	O	O	O
Drop out permanently (exclude transferring)?	O	O	O	O
Transfer to another college before graduating?	O	O	O	O
Enter active duty in the armed services before completing college?	O	O	O	O
Be satisfied with your college?	O	O	O	O
Be more successful after graduation than most students attending this college?	O	O	O	O
Find a job after graduation in the field for which you were trained?	O	O	O	O
Get married while in college? (skip if married)	O	O	O	O
Get married within a year after college? (skip if married)	O	O	O	O
Adopt a child some day?	O	O	O	O

34. Do you feel that you will need any special help in any of the following subjects? (Mark all that apply)

English	○	Social Studies	○
Reading	○	Science	○
Mathematics	○	Foreign Language	○

35. Below is a list of 68 different undergraduate major fields grouped into general categories. Mark only one circle to indicate your probable field of study.

ARTS AND HUMANITIES		**PROFESSIONAL**	
Architecture	○	Health Technology (medical, dental, laboratory)	○
English (literature)	○	Nursing	○
Fine arts	○	Pharmacy	○
History	○	Predentistry	○
Journalism (writing)	○	Prelaw	○
Language (modern)	○	Premedical	○
Language (other)	○	Preveterinary	○
Music	○	Therapy (occupat., physical, speech)	○
Philosophy	○	Other Profession	○
Speech and Drama	○		
Theology	○		
Other Arts and Humanities	○		
BIOLOGICAL SCIENCE		**SOCIAL SCIENCE**	
Biology (general)	○	Anthropology	○
Biochemistry	○	Economics	○
Biophysics	○	Education	○
Botany	○	History	○
Zoology	○	Political Science (government, int. relations)	○
Other Biological Science	○	Psychology	○
		Social Work	○
BUSINESS		Sociology	○
Accounting	○	Other Social Science	○
Business Admin.	○		
Electronic Data Processing	○		
Secretarial Studies	○	**OTHER FIELDS**	
Other Business	○	Agriculture	○
		Communications (radio, T.V., etc.)	○
ENGINEERING		Computer Science	○
Aeronautical	○	Environmental Science	○
Civil	○	Electronics (technology)	○
Chemical	○	Forestry	○
Electrical	○	Home Economics	○
Industrial	○	Industrial Arts	○
Mechanical	○	Library Science	○
Other Engineering	○	Military Science	○
PHYSICAL SCIENCE		Physical Education and Recreation	○
Chemistry	○	Other (technical)	○
Earth Science	○	Other (nontechnical)	○
Mathematics	○	Undecided	○
Physics	○		
Statistics	○		
Other Physical Science	○		

36. Indicate the importance to you personally of each of the following: (Mark one for each item)

	Essential	Very Important	Somewhat Important	Not Important
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	E	V	S	N
Becoming an authority in my field	E	V	S	N
Obtaining recognition from my colleagues for contributions in my special field	E	V	S	N
Influencing the political structure	E	V	S	N
Influencing social values	E	V	S	N
Raising a family	E	V	S	N
Having an active social life	E	V	S	N
Having friends with different backgrounds and interests from mine	E	V	S	N
Becoming an expert in finance and commerce	E	V	S	N
Having administrative responsibility for the work of others	E	V	S	N
Being very well-off financially	E	V	S	N
Helping others who are in difficulty	E	V	S	N
Participating in an organization like the Peace Corps or Vista	E	V	S	N
Becoming a community leader	E	V	S	N
Making a theoretical contribution to science	E	V	S	N
Writing original works (poems, novels, short stories, etc.)	E	V	S	N
Never being obligated to people	E	V	S	N
Creating artistic work (painting, sculpture, decorating, etc.)	E	V	S	N
Keeping up to date with political affairs	E	V	S	N
Being successful in a business of my own	E	V	S	N
Becoming involved in programs to clean up the environment	E	V	S	N
Developing a meaningful philosophy of life	E	V	S	N
Participating in a community action program	E	V	S	N
Getting married within the next five years (skip if married)	E	V	S	N

37. Below are some of the reasons that might have influenced your decision to attend this particular college. How important was each reason in deciding to come here? (Mark one answer for each statement)

	Very Important	Somewhat Important	Not Important
My relatives wanted me to come here	V	S	N
I wanted to live away from home	V	S	N
This college has a very good academic reputation	V	S	N
This college has a good athletic program	V	S	N
I was offered financial assistance	V	S	N
Most of my friends are going to this college	V	S	N
Because of low tuition	V	S	N
Someone who had been here before advised me to go	V	S	N
Because of the special educational programs offered	V	S	N
I was not accepted anywhere else	V	S	N
My guidance counselor advised me to go	V	S	N
I wanted to live at home	V	S	N

DIRECTIONS:

The remaining circles are provided for items specifically designed by your college, rather than by the American Council on Education. If your college has chosen to use the circles, observe carefully the supplemental directions given you.

38. A B C D E
39. A B C D E
40. A B C D E
41. A B C D E
42. A B C D E
43. A B C D E
44. A B C D E
45. A B C D E
46. A B C D E
47. A B C D E

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APPENDIX C: STUDENT INFORMATION FORM, 1974

YOUR NAME (Please print) First Middle or Maiden Last

HOME STREET ADDRESS (print)

CITY (print) STATE Zip Code

482798 1974 CIRP FRESHMAN SURVEY

When were you born? Month (01-12) Day (01-31) Year

Dear Student:

The information in this form is being collected as part of a continuing study of higher education conducted jointly by the American Council on Education and the University of California at Los Angeles. Your voluntary participation in this research is being solicited in order to achieve a better understanding of how students are affected by their college experiences. Detailed information on the goals and design of this research program are furnished in research reports available from the Higher Education Laboratory at UCLA. Identifying information has been requested in order to make subsequent mail follow-up studies possible. Your response will be held in the strictest professional confidence.

Sincerely,

Alexander W. Astin

Alexander W. Astin, Director
Cooperative Institutional Research Program

DO NOT MARK IN THIS AREA

MARK IN THIS AREA ONLY IF DIRECTED

GRP. CODE

DIRECTIONS: Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.

- Use only black lead pencil (No. 2 or less).
- Make heavy black marks that fill the circle.
- Erase cleanly any answer you wish to change.
- Make no stray markings of any kind.

EXAMPLE:

Will marks made with ball pen or fountain pen be properly read? Yes . ○ No . ●

1. Your sex: Male . . ○ Female . . ○

2. Are you a veteran?
(Mark one) No . . ○ Yes . . ○

3. How old will you be on December 31 of this year? (Mark one)

16 or younger	○	21	○
17	○	22	○
18	○	23-25	○
19	○	26-29	○
20	○	30 or older	○

4. In what year did you graduate high school? (Mark one)

1974	○	Did not graduate but passed G.E.D. test	○
1973	○	Never completed high school	○
1972	○		
1971 or earlier	○		

5. Please print within the box:

Name of your high school

City State

6. Was your high school program: (Mark one)
College preparatory? . . . . . ○
Other? (For ex., vocational) . . . . . ○

7. What was your average grade in high school? (Mark one)

A or A+	○	B-	○
A-	○	C+	○
B+	○	C	○
B	○	D	○

8. Are you enrolled (or enrolling) as a: (Mark one)
Full-time student? . ○
Part-time student? . ○

9. Prior to this term, have you ever taken courses for credit at this institution?
Yes . . ○ No . . ○

10. Since leaving high school, have you ever taken courses at any other institution?

(Mark all that apply in each column)	For Credit	Not for Credit
No	○	○
Yes, at a junior or cmty. college	○	○
Yes, at a four-year college or university	○	○
Yes, at some other postsecondary school (For ex., technical, vocational, business)	○	○

11. What is the highest academic degree that you intend to obtain?

(Mark one in each column)	Highest Planned	Highest Planned at this college
None	○	○
Associate (A.A. or equivalent)	○	○
Bachelor's degree (B.A., B.S., etc.)	○	○
Master's degree (M.A., M.S., etc.)	○	○
Ph.D. or Ed.D.	○	○
M.D., D.O., D.D.S., or D.V.M.	○	○
LL.B. or J.D. (Law)	○	○
B.D. or M.Div. (Divinity)	○	○
Other	○	○

12. Where do you plan to live during the fall term? If you had a choice, where would you have preferred to live?

(Mark one in each column)	Plan To Live	Prefer To Live
With parents or relatives	○	○
Other private home, apartment or room	○	○
College dormitory	○	○
Fraternity or sorority house	○	○
Other campus student housing	○	○
Other	○	○

13. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here?
(Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
My relatives wanted me to come here	V	S	N
I wanted to live away from home	V	S	N
My teacher advised me	V	S	N
This college has a very good academic reputation	V	S	N
I was offered financial assistance	V	S	N
Someone who had been here before advised me to go	V	S	N
This college offers special educational programs	V	S	N
This college has low tuition	V	S	N
My guidance counselor advised me	V	S	N
I wanted to live at home	V	S	N
I could not get a job	V	S	N

14. Is this college your: (Mark one)
First choice? . . . ○ Less than second
Second choice? . . ○ choice? . . . ○

(Note: Please check that your pencil markings are completely darkening the circles. Do not use pen or make ✓'s or X's. Thank You.)

15. What is your best estimate of your parents' total income last year? Consider annual income from all sources before taxes. (Mark one)

- Less than $3,000
- $3,000–$3,999
- $4,000–$5,999
- $6,000–$7,999
- $8,000–$9,999
- $10,000–$12,499
- $12,500–$14,999
- $15,000–$19,999
- $20,000–$24,999
- $25,000–$29,999
- $30,000–$34,999
- $35,000–$39,999
- $40,000–$49,999
- $50,000 or more

16. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less		
Some high school		
High school graduate		
Postsecondary school other than college		
Some college		
College degree		
Some graduate school		
Graduate degree		

17. Are you: (Mark all that apply)

- White/Caucasian
- Black/Negro/Afro-American
- American Indian
- Oriental
- Mexican-American/Chicano
- Puerto Rican-American
- Other

18. Current religious preference: (Mark one in each column)

	Yours	Father's	Mother's
Baptist			
Congregational (U.C.C.)			
Eastern Orthodox			
Episcopal			
Jewish			
Latter Day Saints (Mormon)			
Lutheran			
Methodist			
Muslim			
Presbyterian			
Quaker (Society of Friends)			
Roman Catholic			
Seventh Day Adventist			
Unitarian-Universalist			
Other Protestant			
Other Religion			
None			

19. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Mark one answer for each possible source)

	None	$1–$499	$500–$999	$1,000–$1,999	$2,000–$4,000	Over $4,000
Parental, or family aid, or gifts						
Grants or Scholarships:						
Basic Educational Opportunity Grant						
Supplemental Educational Opportunity Grant						
College Work-Study grant						
State scholarship or grant						
Local or private scholarship or grant						
Loans:						
Fed. guaranteed student loan						
Nat'l direct student loan						
Other loan						
Full-time work						
Part-time or summer work (other than above)						
Savings						
Spouse						
Your G.I. benefits						
Your parent's G.I. benefits						
Social secur. dependent's benefits						
Other						

20. What was your total income last year independent of your parents? Consider annual income from all sources before taxes. (Mark one)

- None
- Less than $500
- $500–$999
- $1,000–$1,999
- $2,000–$2,999
- $3,000–$4,999
- $5,000–$9,999
- $10,000 or more

21. Are you financially independent of your parents this year? Were you financially independent last year? (Mark one for each year)

	Yes	No
This year		
Last year		

22. Do you have any concern about your ability to finance your college education? (Mark one)

- None (I am confident that I will have sufficient funds)
- Some concern (but I will probably have enough funds)
- Major concern (not sure I will have enough funds to complete college)

23. Which applies to you? (Mark one)

- Presently married
- Presently engaged
- Have been seeing one person exclusively
- Have been seeing several persons, but no one exclusively
- Have not been dating in recent months

24. Most people identify with (feel they have a great deal in common with) a lot of different groups. But they identify more with some groups than with others. How strongly do you identify with each of the following groups? (Mark one in each row)

	To a great degree	Strongly	Moderately	Little or not at all
People who live in my community				
People of my own religion				
People of my own sex				
People of my own race or ethnic group				
People of my own generation				

25. Rate yourself on each of the following traits as you really think you are when compared with the average student of your own age. We want the most accurate estimate of how you see yourself. (Mark one for each trait)

Trait	Highest 10 Percent	Above Average	Average	Below Average	Lowest 10 Percent
Academic ability					
Athletic ability					
Artistic ability					
Cheerfulness					
Defensiveness					
Drive to achieve					
Leadership ability					
Mathematical ability					
Mechanical ability					
Originality					
Physical attractiveness					
Political conservatism					
Political liberalism					
Popularity					
Popularity with the opposite sex					
Public speaking ability					
Self-confidence (intellectual)					
Self-confidence (social)					
Sensitivity to criticism					
Stubbornness					
Understanding of others					
Writing ability					

26. How would you characterize your political views? (Mark one)

- Far left
- Liberal
- Middle-of-the-road
- Conservative
- Far right

27. What is:

(M) Your mother's current occupation?
(F) Your father's current occupation?
(Y) Your probable future occupation?

(Mark one in each column. If your father or mother is deceased or retired, please indicate his or her last occupation.)

	Y	F	M
Accountant or auditor	Y	F	M
Architect or urban planner	Y	F	M
Artist (painting, sculpture, etc.)	Y	F	M
Business: banker or financier	Y	F	M
Business: buyer or purchasing agent	Y	F	M
Business: manager or administrator	Y	F	M
Business: owner or proprietor	Y	F	M
Business: public relations or advertising	Y	F	M
Business: sales worker	Y	F	M
Carpenter	Y	F	M
Clergy or religious worker	Y	F	M
Clerical worker: secretary, stenographer, typist, or bookkeeper	Y	F	M
Clerical worker: other	Y	F	M
Commercial artist, designer, decorator	Y	F	M
Computer programmer or analyst	Y	F	M
Construction craftsman, n.e.c.*	Y	F	M
Counselor: guidance, family or school	Y	F	M
Dentist (incl. orthodontist)	Y	F	M
Draftsman	Y	F	M
Driver: truck, taxi or bus	Y	F	M
Electrician	Y	F	M
Engineer	Y	F	M
Factory worker, n.e.c.*	Y	F	M
Farm or ranch laborer	Y	F	M
Farm or ranch owner or manager	Y	F	M
Foreman, n.e.c.*	Y	F	M
Forester, conservationist, fish or wildlife specialist	Y	F	M
Government official, administrator or politician	Y	F	M
Home economist or dietitian	Y	F	M
Homemaker (full-time)	Y	F	M
Lawyer or judge	Y	F	M
Librarian or archivist	Y	F	M
Laborer (unskilled or semi-skilled)	Y	F	M
Law enforcement officer	Y	F	M
Mathematician, statistician or actuary	Y	F	M
Mechanic, machinist or repairman	Y	F	M
Military (career)	Y	F	M
Nurse	Y	F	M
Optometrist	Y	F	M
Performing artist, musician or entertainer	Y	F	M
Pharmacist or pharmacologist	Y	F	M
Physician or surgeon	Y	F	M
Plumber	Y	F	M
Psychologist (clinician or therapist only)	Y	F	M
Scientific researcher	Y	F	M
Service worker: private household (maid, cook, etc.)	Y	F	M
Service worker: protective (other than law enforcement)	Y	F	M
Service worker: other	Y	F	M
Skilled tradesman, n.e.c.*	Y	F	M
Social, welfare or recreation worker	Y	F	M
Teacher, professor or administrator: college, university	Y	F	M
Teacher or administrator: secondary	Y	F	M
Teacher or administrator: elementary	Y	F	M
Teacher or education specialist: other than above	Y	F	M
Technician or technologist (health)	Y	F	M
Technician or technologist (other)	Y	F	M
Therapist (physical, occupational, speech)	Y	F	M
Veterinarian	Y	F	M
Writer, journalist, interpreter	Y	F	M
Other occupation, n.e.c.*	Y	F	M
Unemployed		F	M
Undecided	Y	F	M

*Not elsewhere classified

Continued in the next column

28. Which of the following are important to you in your long-term choice of a career occupation?

(Mark one in each row) (N) Not important (S) Somewhat important (V) Very important

	V	S	N
Job openings generally available	V	S	N
Rapid career advancement possible	V	S	N
High anticipated earnings	V	S	N
Well-respected or prestigious occupation	V	S	N
Great deal of independence	V	S	N
Chance for steady progress	V	S	N
Can make an important contribution to society	V	S	N
Can avoid pressure	V	S	N
Can work with ideas	V	S	N
Can be helpful to others	V	S	N
Able to work with people	V	S	N
Intrinsic interest in the field	V	S	N

MAKE SURE YOU HAVE ANSWERED ITEM 28

29. Mark one in each row:

(4) Agree Strongly
(3) Agree Somewhat
(2) Disagree Somewhat
(1) Disagree Strongly

	1	2	3	4
The Federal government is not doing enough to control environmental pollution	1	2	3	4
The Federal government is not doing enough to protect the consumer from faulty goods and services	1	2	3	4
State and Federal governments should provide more money for private colleges and universities	1	2	3	4
The Federal government should help college students with more grants instead of loans	1	2	3	4
There is too much concern in the courts for the rights of criminals	1	2	3	4
People should not obey laws which violate their personal values	1	2	3	4
As long as they work hard, people should be paid equally regardless of ability or quality of work	1	2	3	4
The activities of married women are best confined to the home and family	1	2	3	4
A couple should live together for some time before deciding to get married	1	2	3	4
Parents should be discouraged from having large families	1	2	3	4
If two people really like each other, it's alright for them to have sex even if they have known each other for only a very short time	1	2	3	4
Women should receive the same salary and opportunities for advancement as men in comparable positions	1	2	3	4
Wealthy people should pay a larger share of taxes than they do now	1	2	3	4
Marijuana should be legalized	1	2	3	4
Large political campaign contributions from wealthy individuals should be outlawed	1	2	3	4
Realistically, an individual can do little to bring about changes in our society	1	2	3	4
Compared to most older people in their forties and fifties, young people these days are more idealistic	1	2	3	4
Young people these days understand more about sex than most older people	1	2	3	4
College officials have the right to regulate student behavior off campus	1	2	3	4
Faculty promotions should be based in part on student evaluations	1	2	3	4
College grades should be abolished	1	2	3	4
Colleges would be improved if organized sports were de-emphasized	1	2	3	4
Student publications should be cleared by college officials	1	2	3	4
College officials have the right to ban persons with extreme views from speaking on campus	1	2	3	4
Students from disadvantaged social backgrounds should be given preferential treatment in college admissions	1	2	3	4
Most college officials have been too lax in dealing with student protests on campus	1	2	3	4
Open admissions (admitting anyone who applies) should be adopted by all publicly supported colleges	1	2	3	4
Even if it employs open admissions, a college should use the same performance standards in awarding degrees to all students	1	2	3	4

30. Below is a list of different undergraduate major fields grouped into general categories. Mark only one circle to indicate your probable field of study.

ARTS AND HUMANITIES
- Art, fine and applied
- English (language and literature)
- History
- Journalism
- Language and Literature (except English)
- Music
- Philosophy
- Speech and Drama
- Theology or Religion
- Other Arts and Humanities

BIOLOGICAL SCIENCE
- Biology (general)
- Biochemistry or Biophysics
- Botany
- Marine (Life) Science
- Microbiology or Bacteriology
- Zoology
- Other Biological Science

BUSINESS
- Accounting
- Business Admin. (general)
- Finance
- Marketing
- Management
- Secretarial Studies
- Other Business

EDUCATION
- Business Education
- Elementary Education
- Music or Art Education
- Physical Education or Recreation
- Secondary Education
- Special Education
- Other Education

ENGINEERING
- Aeronautical or Astronautical Eng.
- Civil Engineering
- Chemical Engineering
- Electrical or Electronic Engineering
- Industrial Engineering
- Mechanical Engineering
- Other Engineering

PHYSICAL SCIENCE
- Astronomy
- Atmospheric Science (incl. Meteorology)
- Chemistry
- Earth Science
- Marine Science (incl. Oceanography)
- Mathematics
- Physics
- Statistics
- Other Physical Science

PROFESSIONAL
- Architecture or Urban Planning
- Home Economics
- Health Technology (medical, dental, laboratory)
- Library or Archival Science
- Nursing
- Pharmacy
- Therapy (occupational, physical, speech)
- Other Professional

SOCIAL SCIENCE
- Anthropology
- Economics
- Geography
- Political Science (govt., international relations)
- Psychology
- Social Work
- Sociology
- Other Social Science

TECHNICAL
- Building Trades
- Data Processing or Computer Programming
- Drafting or Design
- Electronics
- Mechanics
- Other Technical

OTHER FIELDS
- Agriculture
- Communications (radio, T.V., etc.)
- Computer Science
- Forestry
- Law Enforcement
- Military Science
- Other Field
- Undecided

31. Indicate the importance to you personally of each of the following:
(Mark one for each item)

(N) Not Important — (S) Somewhat Important — (V) Very Important — (E) Essential

	E	V	S	N
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	E	V	S	N
Becoming an authority in my field	E	V	S	N
Obtaining recognition from my colleagues for contributions to my special field	E	V	S	N
Influencing the political structure	E	V	S	N
Influencing social values	E	V	S	N
Raising a family	E	V	S	N
Having administrative responsibility for the work of others	E	V	S	N
Being very well off financially	E	V	S	N
Helping others who are in difficulty	E	V	S	N
Making a theoretical contribution to science	E	V	S	N
Writing original works (poems, novels, short stories, etc.)	E	V	S	N
Creating artistic work (painting, sculpture, decorating, etc.)	E	V	S	N
Being successful in a business of my own	E	V	S	N
Becoming involved in programs to clean up the environment	E	V	S	N
Developing a meaningful philosophy of life	E	V	S	N
Participating in a community action program	E	V	S	N
Keeping up to date with political affairs	E	V	S	N

32. What is your best guess as to the chances that you will:
(Mark one for each item)

(N) No Chance — (L) Very Little Chance — (S) Some Chance — (V) Very Good Chance

	V	S	L	N
Change major field?	V	S	L	N
Change career choice?	V	S	L	N
Fail one or more courses?	V	S	L	N
Graduate with honors?	V	S	L	N
Be elected to a student office?	V	S	L	N
Join a social fraternity, sorority, or club?	V	S	L	N
Live in a coeducational dorm?	V	S	L	N
Live in a commune while in college?	V	S	L	N
Be elected to an academic honor society?	V	S	L	N
Make at least a "B" average?	V	S	L	N
Need extra time to complete your degree requirements?	V	S	L	N
Have to work at an outside job during college?	V	S	L	N
Seek vocational counseling?	V	S	L	N
Seek individual counseling on personal problems?	V	S	L	N
Enroll in honors courses?	V	S	L	N
Get a bachelor's degree (B.A., B.S., etc.)?	V	S	L	N
Drop out of this college temporarily (exclude transferring)?	V	S	L	N
Drop out permanently (exclude transferring)?	V	S	L	N
Transfer to another college before graduating?	V	S	L	N
Enter active duty in the armed services before completing college?	V	S	L	N
Be satisfied with your college?	V	S	L	N
Be more successful after graduation than most students attending this college?	V	S	L	N
Find a job after graduation in the field for which you were trained?	V	S	L	N
Get married while in college? (skip if married)	V	S	L	N
Get married within a year after college? (skip if married)	V	S	L	N

33. (A) (B) (C) (D) (E)
34. (A) (B) (C) (D) (E)
35. (A) (B) (C) (D) (E)
36. (A) (B) (C) (D) (E)
37. (A) (B) (C) (D) (E)
38. (A) (B) (C) (D) (E)
39. (A) (B) (C) (D) (E)
40. (A) (B) (C) (D) (E)
41. (A) (B) (C) (D) (E)
42. (A) (B) (C) (D) (E)

DIRECTIONS
The remaining circles are provided for items specifically designed by your college, rather than by the Higher Education Laboratory. If your college has chosen to use the circles, observe carefully the supplemental directions given you.

THANK YOU!

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